Natchez Trace Parkway Section 3X Multi-Use Trail

Environmental Assessment

Prepared for

U.S. Department of the Interior National Park Service Natchez Trace Parkway 2680 Natchez Trace Parkway Tupelo, Mississippi 38804

Prepared by

U.S. Department of Transportation Federal Highway Administration Eastern Federal Lands Highway Division 21400 Ridgetop Circle Sterling, Virginia 20166

and

URS Corporation – Maryland 4 North Park Drive Hunt Valley, Maryland 21030

September 2002

TABLE OF CONTENTS

	<u>Page</u>
Executive Summary	vi
Section 1: Purpose and Need	1-1
Project Location	
Description of and Need for Proposed Action	
Project Scoping and Issues	
Definitions	
Permits	1-3
Section 2: Alternatives	2-1
Alternatives Previously Considered But Dismissed	2-1
Alternatives Retained for Detailed Study	
Trail Features	
Alternative 1: No-Build	2-5
Alternative 2: Parkway Shoulder Alternative	2-5
Alternative 3: Preferred Alternative	2-6
Environmentally Preferred Alternative	2-9
Section 3: Affected Environment	3-1
Environmental Setting	3-1
Natural Resources	3-1
Terrestrial and Aquatic Environment	
Rare, Threatened and Endangered Species	3-4
Wetlands	3-5
Physical Environment	3-6
Air Quality	3-6
Water Resources and Quality	
Floodplains and Floodways	3-9
Geology and Topography	3-10
Soils	3-12
Noise	3-13
Parkway Noise Levels	
Natchez Area Noise Levels	3-14
Socio-Economic Environment	
Social Environment	3-14
Population and Housing	
Environmental Justice	
Economic Environment	3-16
Employment and Economics	3-16
The Visitor Industry in Natchez	3-18
Land Use	3-19

TABLE OF CONTENTS - CONTINUED

	<u>Page</u>
Cultural Resources	3-20
Historic Architectural Resources	
Archaeological Resources	3-22
Visitor Use and Experience	
Background	3-25
Visual Experience and Aesthetics	3-25
Baseline Survey	3-27
Section 4: Environmental Consequences	4-1
Environmental Setting	4-1
Natural Resources	
Terrestrial and Aquatic Environment	
Rare, Threatened and Endangered Species	
Wetlands	
Physical Environment	
Air Quality	
Water Resources and Water Quality	
Floodplains and Floodways	
Geology and Topography	
Soils	
Noise	
Socio-Economic Environment	
Social Environment	
Population and Housing	
Environmental Justice	
Economic Environment	
Employment and Economics	
The Visitor Industry in Natchez	
Land Use	
Cultural Resources	4-22
Effects on Parks and Recreation Facilities	
Historic Architectural Resources	
Archaeological Resources	
Visitor Use and Experience	
Visual Experience and AestheticsSafety	
Secondary and Cumulative Effects	
Section 5: Identification of the Preferred Alternative	5-1
Environmentally Preferred Alternative	
Preferred Alternative	5-1

TABLE OF CONTENTS - CONTINUED

	<u>Page</u>
Section 6: Commitments and Resources	6-1
Commitments and Resources	6-1
Irreversible and Irretrievable Commitment of Resources	6-1
Unavoidable Adverse Environmental Effects	6-1
Local Short-Term Uses and Maintenance/Enhancement of	6-1
Long-Term Productivity	
Environmental Commitments	6-1
Impairment of Park Resources	6-2
Section 7: Compliance with Environmental Laws and Regulations	7-1
Compliance with Environmental Laws and Regulations	7-1
National Environmental Policy Act (NEPA)	7-1
Endangered Species Act of 1973	
Clean Water Act of 1972	7-2
National Historic Preservation Act of 1966	7-2
Executive Order 12898	7-3
Compliance with State and Local Government Regulations	7-4
Section 8: Interrelationship with Other Plans	8-1
Interrelationship with Other Plans	
The National Park Service Organic Act of August 25, 1916	8-1
Section 9: Involvement and Coordination	9-1
Involvement and Coordination	9-1
Section 10: List of Preparers and Reviewers	10-1
Section 11: References.	11-1

Appendices:

 $\begin{array}{lll} & Appendix \ A-Agency \ Correspondence \\ & Appendix \ B-Public \ Meeting \ Information \end{array}$

LIST OF FIGURES

Figure Number	<u>Title</u>	On or Following Page
1	Typical Cross Section	v
2	Vicinity Map	
3	Project Location Map	
4	Design Visualization: Parkway Shoulder Alternative	
5	Bridge Over Perkins Creek	2-7
6	Bridge Over U.S. 84 and 98	2-7
7	Design Visualization: View from Parkway	
	of Trail Joining Parkway Bridge	
8	Design Visualization: View From Parkway of Trail .	2-7
9	Typical Elevation and Section for New Bridge Const	
10	Trail Alternatives	2-9
11	Trail Alternatives	2-9
12	Trail Alternatives	2-9
13	Trail Alternatives	

LIST OF TABLES

<u>Table Number</u>	<u>Title</u>	On or Following Page
1	Natchez Trace Parkway Bridges	2-2
2	Racial Demographics, 2000, Natchez	
3	Income Trends, 1980-1990, Adams County, Mississippi and United States	3-18

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL EXECUTIVE SUMMARY

The National Park Service (NPS) proposes to construct a multi-use trail to run adjacent to the Natchez Trace Parkway in the vicinity of Natchez, Mississippi. The trail will help to reduce the potential for conflict between pedestrians/bicyclists and motor vehicle traffic. This Environmental Assessment (EA) addresses the plans of the NPS for the multi-use trail construction, as well as the existing environment and anticipated impacts to the surrounding environment.

The project study area includes the area one half-mile north of the interchange at Route 61 and south to Liberty Road in the City of Natchez. The study area falls within National Park Service property and averages approximately 800 feet in width, straddling the existing Parkway or the marked centerline for the future Parkway. The Parkway motor road has only been constructed for a portion of the project area, and only a small section of Parkway, located within the half-mile north of Route 61, is currently open to the public. Most of this land is comprised of open space and deciduous forest. No federally listed endangered or threatened species, candidate species for listing, or their habitats are known to occur within the proposed project area. Significant flood events in this drainage area occur regularly, and several riverine wetlands are found throughout the project area.

This document presents two build alternatives and one no-build alternative. The build alternatives are the Parkway Shoulder Alternative and the Preferred Alternative. This EA examines the alternatives' impacts on socio-economic, cultural, and natural environmental conditions.

The No-Build Alternative would not require any actions to occur. Existing safety concerns would not be addressed and visitor use would not be promoted under this alternative.

No environmental impacts would result from the No-Build Alternative.

The Parkway Shoulder Alternative would be a trail directly alongside the Parkway motor road, with one five-foot lane on either side of the Parkway. For the length of the Parkway that is currently built, the five-foot wide trail would be placed on the existing roadway shoulder with a one-foot grass shoulder. This five-foot wide trail with one-foot shoulder would be built concurrently with the motor road in areas where the Parkway has not been completed. A summary of environmental impacts resulting from the Parkway Shoulder Alternative would primarily consist of: 1) impacts to forests and open space along the Parkway motor road, identical to those impacted for construction of the Parkway; 2) impacts to riverine wetlands, also identical to those impacted for construction of the Parkway; 3) temporary construction impacts to air quality, water resources, water quality, floodplains, floodways, and noise levels; 4) ground disturbance; and 5) temporary exposure of soils to erosion, excavation, and mixing of soil horizons, and addition of aggregate fill and road surface pavement. Impacts to archeological resources resulting from Parkway motor road construction would correspondingly be impacted by construction of the trail.

The Preferred Alternative would remain on the west side of the Parkway motor road for the entire length of the project area, utilizing some Parkway bridges and requiring new bridges in other locations. A typical cross section of the trail is shown in **Figure 1**. Environmental impacts resulting from the Preferred Alternative would be different than those resulting from Parkway motor road construction, and would primarily consist of: 1) impacts to the surrounding terrestrial and aquatic environment; 2) impacts to twenty-five riverine wetlands, twenty-two of which would not coincide with Parkway construction impacts; 3) temporary construction impacts to air quality, water resources, floodways, water quality, and noise levels; 4) minor impacts to the floodplain associated with several streams; 5) ground disturbance with areas of cut and fill; and 6) soil excavation and fill, and potential soil erosion. Socio-economic impacts would include: 1) enhanced visitor experience benefiting the regional visitor industry and its associated business; 2) potential increased use within the Park; 3) possible construction of a parking lot near the Elizabeth Female Academy National Register site, and opportunities for public education at that site; 4) impacts to potential National Register-eligible archeological

sites; 5) reduction of safety conflicts between motorists and trail users; and 6) enhanced visual experience and aesthetics for trail users.

Temporary and negligible air quality and noise impacts would occur during construction of either of the build alternatives; however, use of the trail would not produce any adverse air quality or noise conditions. Construction of either build alternative would not require any residential or commercial displacement, adversely affect neighborhoods or communities, disproportionately affect low-income, minority, elderly, or handicapped populations, or harm the area's economic environment. Particularly under the Preferred Alternative, a safer environment for trail users and vehicular traffic would be created as a result of separating pedestrians using the multi-use trail from vehicles using the motor road.

This document is prepared pursuant to the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), Section 7 of the Endangered Species Act (ESA), the Clean Water Act (CWA), and Executive Orders protecting wetlands and floodplains.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL SECTION 1: PURPOSE AND NEED

PROJECT LOCATION

The National Park Service (NPS) is proposing a multi-use trail that would parallel the Natchez Trace Parkway in the vicinity of Natchez, Mississippi (see **Figure 2** Vicinity Map). A trail has already been constructed in some locations along the Parkway, which stretches from Nashville, Tennessee south to Natchez, Mississippi. The Parkway is only open to the public north of the Route 61 interchange. From Route 61 south to the overpass at New Route 84 & 98, approximately three miles, the Parkway has been constructed, but is not yet open to vehicular traffic. South of this overpass to Liberty road, approximately five miles, the Parkway has not yet been built. The total project area for the 3X section of the multi-use trail includes the area one half-mile north of the interchange at Route 61 and south to Liberty Road in the City of Natchez (**Figure 3**).

The project study area is approximately 8.6 miles long. It falls entirely within National Park Service property and averages approximately 800 feet in width, straddling the existing Parkway or the marked centerline for the future Parkway. The area widens and narrows at irregular intervals, providing land for Parkway interchanges and future interpretive and recreational developments.

DESCRIPTION OF AND NEED FOR PROPOSED ACTION

In the greater Natchez metropolitan area, the climate is conducive to outdoor activity every month of the year, and a gentle topography attracts trail users of all interests and abilities. Since the completion of the Natchez Trace Parkway Comprehensive Trail Plan, recreation pursuits such as cycling, jogging, and walking have become even more popular forms of sport and exercise along the Natchez Trace Parkway. There is currently a potential for conflict between trail users and vehicular traffic in the greater Natchez metropolitan area.

Accommodations to separate trail users and vehicular traffic is recommended in the Comprehensive Trail Plan.

Over the past several years the Natchez Trace Parkway has received national attention in major cycling and travel magazines, extolling the virtues of cycling the Parkway. The entire Natchez Trace Parkway is a designated bike route, and several organized rides traversing the length of the Parkway occur annually. The National Park Service has been given a recommendation by Congress to establish a route for a multi-use trail along those sections of the Natchez Trace Parkway remaining to be constructed (United States Senate Report 106, National Park Service FY2000 Appropriation Bill, page 36). Two areas of the Parkway remaining to be constructed consist of approximately twenty miles, project 3P in Jackson, Mississippi and project 3X in Natchez, Mississippi. A Multi-Use Trail Study/EA has previously been completed for the Jackson section. A multi-use trail, also referred to as a shared use path, is a facility on exclusive right-of-way and with minimal cross flow by motor vehicles.

PROJECT SCOPING AND ISSUES

The Federal Highway Administration (FHWA), in cooperation with the National Park Service (NPS) is continuing the design for the proposed construction for the southern terminus of the Natchez Trace Parkway in Natchez, Mississippi. The multi-use trail would be constructed concurrent with the construction of the Natchez Trace Parkway. This environmental assessment is required in order to determine the potential impacts that the proposed construction of the trail would have on existing cultural, natural, and social environments. Topics address federal laws, regulations and orders, and any potentially affected resources. This information is presented in the Affected Environment and Environmental Consequences sections of this report. Similar information for the Natchez Trace Parkway motor road can be found in the 1998 Environmental Impact Statement, for the Natchez Trace Parkway Section 3X, Southern Terminus. This project was initiated in direct response to the recommendation from Congress, therefore alternatives to trail development were never considered.

DEFINITIONS

- 1. <u>Temporary impacts</u> Impacts anticipated to occur during construction only. Upon completion of the construction activities, conditions are likely to return to those that existed prior to construction.
- 2. <u>Short-term impacts</u> Impacts that may extend past the construction period, but are not anticipated to last more than a couple of years.
- 3. <u>Long-term impacts</u> Impacts that may extend past the construction period and are anticipated to last more than a couple of years.
- 4. <u>Negligible</u> Little or no impact (not measurable).
- 5. <u>Minor</u> Changes or disruptions may occur, but does not result in a substantial resource impact.
- 6. <u>Major</u> Easily defined and measurable. Results in a substantial resource impact.
- 7. <u>Impairment</u> An impact that would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

PERMITS

Section 404 of the Clean Water Act is administered and enforced by the U.S. Army Corps of Engineers (USACE). It regulates the discharge of dredged and fill material into Waters of the United States, including navigable waters and adjacent wetlands. If any proposed actions impact Waters of the U.S., then the action is subject to review under the 404 regulatory program. In addition, a Section 401 Water Quality Certification must also be issued by the State in which the impact occurs. Coordination with the USACE Vicksburg District has been initiated for the Multi-Use Trail Project. The USACE has completed a jurisdictional determination for the Project Study Area and has determined that there are jurisdictional waters that are subject to regulation pursuant to Section 404 of the Clean Water Act.

The U.S. Fish and Wildlife Service (USFWS) and the Mississippi Department of Wildlife, Fisheries and Parks have been contacted regarding any potential State or Federally listed or proposed rare, threatened, or endangered species. USFWS databases revealed no records of federally listed rare, threatened or endangered species within the Project Study Area. The USFWS anticipates "no significant adverse impacts to fish and wildlife species or Service lands, to result from the proposed activity." The database of the Mississippi Department of Wildlife, Fisheries and Parks also indicates no species recorded and no wilderness areas or wildlife preserves currently known that would be affected within the Project Area. They do identify four species of special concern, however, located approximately one mile from the Project Area. Details regarding these species and a request that construction activities within these areas do not destroy these species and/or their habitats can be found in **Appendix A** The proposed action would not involve a taking of threatened or endangered species, and therefore a permit would not be required under Section 9 of the Endangered Species Act.

to the motor road bridge. In addition to the Parkway bridge crossings being widened or constructed parallel to the trail, an additional 18 structures would be needed for the multi-use trail.

This alternative was dismissed due to engineering difficulties with affixing the trail to Parkway bridges. Use of Parkway bridges throughout the length of the trail would raise safety concerns due to the necessary merging of trail users onto Parkway bridges with motor vehicles. Special design techniques would need to be applied to ensure safety at these locations. The enjoyment of the natural landscape would be lessened every time the users are brought closer to the motor road and on-coming traffic. Where crossings would not need a new bridge, the cost of an existing bridge equaled that of constructing a separate structure.

Table 1: Natchez Trace Parkway Bridges

Bridge Location	Construction Status
St. Catherine Creek & Melvin Bayou Stream	not built
County Road A	not built
County Road P	not built
Palestine Road	not built
Stream Crossing	not built
Perkins Creek Stream Crossing	not built
County Road B	not built
New Route 84 & 98	built
St. Catherine Creek Stream Crossing	built
Kaiser Lake Road	built
Crossroad B	built
North Fork of St. Catherine Creek Stream	built
U.S. Route 61	built

Western Alternative with New Bridges

Again, with this alternative, the multi-use trail would remain solely on the western side of the Natchez Trace Parkway. Only one Parkway bridge would be utilized, that being the mandatory bridge crossing over St. Catherine Creek and Melvin Bayou at the southern end of the project area. Trail bridges spanning the same roads and streams that the motor road spans would

be constructed parallel to the motor road bridges. Approximately 27 bridges and/or culverts would need to be constructed for this alternative.

Although this alternative was considered reasonable, it was dismissed, since it would require more grading than the Preferred Alternative, without offering any distinct advantage.

Eastern Alternative with Parkway Bridges

This alternative is identical in concept to the first alternative described above except that the trail would run entirely on the eastern side of the Natchez Trace Parkway. Again all Parkway bridges would be utilized for the trail, and in the same manner. By crossing Parkway bridges 13 times, or 12 times if crossing U.S. Route 61 were not included, the visitor experience would be less enjoyable. A five-percent grade needed to reach each bridge crossing would be difficult to ascend and descend. The Parkway throughout much of the area sits much higher than the surrounding land. There is a significant amount of fill needed to reach the motor road level and the area of disturbance required for this alternative would be significantly greater than alternatives with new bridges.

This alternative was dismissed due to engineering and aesthetic difficulties in affixing the trail to the Parkway bridges, and the more severe topography it would traverse due to its location on the east side of the Parkway. Use of Parkway bridges throughout the length of the trail would raise safety concerns, due to the necessary merging of trail users with motor vehicles on Parkway bridges. The enjoyment of the natural landscape would be lessened every time the users are brought closer to the motor road and on-coming traffic.

Eastern Alternative with New Bridges

Similar to the Western Alternative with New Bridges, this option follows the same concept, but entirely on the east side of the Parkway. This alternative would require

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL
SECTION 2: ALTERNATIVES

Three alternatives are evaluated in detail in this report: Alternative 1 - No-Build Alternative; Alternative 2 - Parkway Shoulder Alternative; and Alternative 3 - Preferred Alternative. Six additional alignments were considered, as well as various options. These considered alternatives are briefly described and the reasons why they were not retained for

detailed study have been included in this section.

ALTERNATIVES PREVIOUSLY CONSIDERED BUT DISMISSED

Several multi-use trail alternatives were considered but dismissed, primarily for constructibility reasons. Wetland impacts and archeological impacts, as well as overall costs for all of these dismissed alternatives are very similar. In addition, all of the alternatives originally considered covered an area extending from Liberty Road to one-half mile north of U.S. Route 61, and would have required a costly crossing of U.S. Route 61. Eliminating this crossing would help reduce overall costs for the project. Each of the following dismissed alternatives are discussed in further detail in the *Draft Candidate Alternatives Report*, 2001.

Western Alternative with Parkway Bridges

This alternative places the multi-use trail solely on the western side of the

Natchez Trace Parkway and utilizes all of the Parkway bridges. With final completion of the

Natchez Trace Parkway motor road, a total of 13 bridges (including U.S. Route 61 crossing)

would be required to cross both existing roads and streams (Refer to Table 1 for a list of

Parkway bridge crossings). The trail would deviate from the Parkway between Parkway bridges,

and connect back to the Parkway bridges to cross roads and streams. For those six bridges

already constructed along the Parkway, an additional ten-foot wide structure would either be

attached to the western side of the bridge, or a separate structure would be built directly adjacent

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 2: Alternatives September 2002

2-1

approximately 36 new structures to be built. Compared to the Preferred Alternative's 28 crossings, this alternative would be more costly and create a greater number of impacts. It was dismissed from further study for these reasons and due to the severity of the terrain on the east side of the Parkway. Constructing the trail at a reasonable grade would be more difficult under these conditions.

East/West Alternative

The East/West Alternative follows a more circuitous pattern than those previously described. Both sides of the Parkway would be utilized for this Alternative. Some Parkway bridges would be utilized and numerous new bridges would have to be built. In some instances where the Parkway bridges would not be utilized the trail runs under the Parkway motor road, under bridges, and switches from one side of the Parkway to the other. A total of 31 structures would be needed. This alternative would require large amounts of earth-work in order to maintain a grade that is usable for the trail.

The Preferred Alternative is located in a higher drainage area of the smaller tributaries than the East/West Alternative. Therefore, the Preferred Alternative would require smaller bridges and culverts to cross the tributaries than the East/West Alternative. For this reason, the East/West Alternative was dismissed from further study.

Parkway Connection Alternative

The final alternative considered but dismissed involves the construction of a multi-use trail connected and adjacent to the Natchez Trace Parkway. A safety barrier similar to a "Jersey wall" between the motor road and the multi-use trail would be required for this alternative, since the trail would have users moving in both directions. Selection of this alignment would not create the visual quality and aesthetic experiences desired by the NPS. The experience of those driving along the Parkway as well as those using the trail would be diminished.

ALTERNATIVES RETAINED FOR DETAILED STUDY

Trail Features

Various areas along the Natchez Trace Parkway already have a multi-use trail

paralleling the roadway. The trails are eight feet wide with two-foot shoulders on either side.

According to the American Association of State Highway and Transportation Officials

guidelines in the Guide for the Development of Bicycle Facilities (1999), a ten-foot paved width

is recommended for a two-directional shared use path. Using these recommendations, the multi-

use trail for the Preferred Alternative would be constructed to be ten feet wide with two-foot

grass/seeded shoulders. The Parkway Shoulder Alternative, which maintains a five-foot lane on

each side of the Parkway, would not be constructed in accordance with these recommendations.

Following is a description of the alternatives retained for detailed study.

Alternative 1: No-Build

Under the No-Build Alternative, no trail would be constructed within the National

Park Service right-of-way of the Natchez Trace Parkway. Bicyclists and hikers would continue

to be permitted to use the Parkway motor road. The existing conditions of the project study area

would not be altered. The 13 bridges listed in Table 1, for the motor road, would not be altered

to include a trail, and no additional bridges would need constructing. These existing conditions

are described in detail in Section 3 of this EA.

Alternative 2: Parkway Shoulder Alternative

This alternative consists of placing designated bicycle lanes adjacent to the travel

lanes of the Parkway motor road, on a paved shoulder. The roadway shoulders would be

reconstructed and paved along the section currently built, and bridges would need to be widened,

specifically in that area between U.S. Route 61 to New U.S. Route 84 & 98, which includes

Parkway bridge crossings over North Fork stream, Crossroad B, Kaiser Lake Road, St. Catherine

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 2: Alternatives September 2002

2-5

Creek, and New Route 84 & 98. This alternative includes a five-foot wide lane on each side of the Parkway. For the section of the Parkway not yet built, the extended width for the trail would be included with the roadway and bridges during construction and be built simultaneously.

One difference between this alternative and any other evaluated is that the fivefoot lanes would need to be considered bicycle lanes, not a multi-use trail. Figure 4 is a computer-simulated drawing that illustrates the trail on both sides of the Parkway. Although a lane on either side of the Parkway would provide for two-directional traffic, a width of five feet does not satisfy the safety needs of a trail that is to provide for multiple-use traffic. A shared use path is defined by the American Association of State Highway and Transportation Officials Guide for the Development of Bicycle Facilities (1999), as "a bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-ofway or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users." This alternative is still considered for this EA a reasonable and viable option, however, since biking is anticipated to be the most prevalent use of the trail. This alternative would present areas of possible conflict between bicycles and motor vehicles, resulting in safety concerns. The locations of trail parking areas would also raise safety concerns, as they would require northbound users to cross the Parkway.

Alternative 3: Preferred Alternative

This alternative follows the west side of the Parkway for the entire eight-plus miles. This alternative parallels the Parkway at varying distances, following it closely in areas where the trail would use Parkway bridges. South of New U.S. Route 84 & 98 the Parkway has not been constructed. The Natchez Trace Parkway, *Final Environmental Impact Statement Section 3X, Southern Terminus*, was completed in October 1998. The design of Parkway bridges over Perkins Creek, Palestine Road, and the 1,600-foot bridge spanning Melvin Bayou and St. Catherine Creek would accommodate the trail by widening the structures to include a 10-foot

wide trail. **Figure 5** is an illustration of the crossing to be built over Perkins Creek, which is representative of the style of bridge that would be used at these three locations. The figure shows the 10-foot wide trail added to the width of the bridge and the cross-section of that bridge. Existing Parkway bridges over Kaiser Lake Road and over New Route 84 & 98 would also require widening to accommodate the 10-foot wide trail bridge. **Figure 6** illustrates the addition of the trail to the Route 84 & 98 Bridge. A computer simulation illustrating the trail along a Parkway bridge is shown in **Figure 7**. **Figure 8** illustrates a view from the Parkway motor road to the trail, shown on the right of the simulation, behind the trees.

One of the design goals for the multi-use trail is to provide ADA accessibility to the maximum extent possible. To achieve this goal, trail grades greater than five percent would be minimized. The preferred alignment maintains a grade of five percent or less from Liberty Road at the southern terminus to the Elizabeth Female Academy ruins, approximately four miles in length. Therefore, approximately half the length of the trail would be accessible to the physically challenged. Portions of the northern half of the trail would be more challenging due to grades over five percent required because of the existing topography.

The Preferred Alternative would also require the construction of 22 new structures. Bridges and culverts would be designed to be compatible with those used for the multi-use trail in other locations along the Parkway (Photo 1). **Figure 9** illustrates a typical plan view and cross section for the many trail bridges that would be constructed. Five at-grade crossings for county roadways are proposed. At these locations the paved multi-use trail would end, users would cross the County roads, and then pick up the paved trail on the opposite side of the street. Signage would be placed along the trail to warn users of the upcoming at-grade crossing and traffic.



Photo 1: Bridge over a stream crossing along the multi-use trail in Jackson, Mississippi.

Four parking areas are proposed along the multi-use trail route. One trailhead parking lot is proposed near Liberty Road at the southern end of the trail. Close to this end of the trail, a connector trail from the southern end of the St. Catherine Creek/Melvin Bayou bridge may also be constructed and lead to another parking terminus near Seargant Prentiss Drive. Another parking area is proposed to be located at the historic Elizabeth Female Academy ruins. A parking lot at the northern-most end of the multi-use trail is also proposed between the North Fork of St. Catherine Creek and U.S. Route 61.

Although the Preferred Alternative does not extend past Route 61, a parking area is still proposed at the northernmost extent of the study area, approximately one half mile north of U.S. Route 61. The existing pull-off at this location would be expanded to provide parking for more vehicles. Based on progress meetings with all involved parties for the project and those knowledgeable on the amount of use of the Parkway by non-vehicular traffic, the parking areas discussed above are estimated to hold approximately ten vehicles, which should be adequate to accommodate the trail user's vehicles. Refer to **Figures 10 through 13**, which illustrate the locations of each proposed parking area, proposed bridge or culvert crossings, the alignment of the Parkway Shoulder Alternative, and the alignment of the Preferred Alternative.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by the criteria provided in the National Environmental Policy Act of 1969 (NEPA), which is further interpreted by the Council on Environmental Quality (CEQ) regulations. This is the alternative that causes the least damage to the biological and physical environment while best protecting, preserving, and enhancing historic and natural resources. This alternative would best achieve a balance between human population and resource use that would permit high standards of living and a wide sharing of life's amenities, and attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable or unintended consequences. Considering only impacts to the biological and physical environment, the No-Build Alternative would be determined the Environmentally Preferred Alternative. However, this alternative does not satisfy any of the recommendations by Congress nor provide any benefits of the build alternatives. Taking this into consideration, the Preferred Alternative is considered to be the Environmentally Preferred Alternative. This alternative not only limits the impacts to the natural and physical environment, but it is also the alternative that best preserves the cultural and historic environment for the trail users, and achieves a balance between human population and resource The Environmental Consequences Section of this EA provides a more detailed analysis of the alternatives and demonstrates why the Preferred Alternative as a whole is the most desirable.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL ENVIRONMENTAL ASSESSMENT SECTION 3: AFFECTED ENVIRONMENT

ENVIRONMENTAL SETTING

The proposed Natchez Trace Multi-Use Trail would be located entirely within National Park Service (NPS) property in Adams County, Mississippi. Deciduous forest covers most of the Project Study Area. Some low-density residential areas, agricultural lands, and recreational lands are scattered along the 8.6 miles just outside the NPS boundary. The Study Area has a rolling topography with many steep and deep stream banks.

NATURAL RESOURCES

Terrestrial and Aquatic Environment

Land not cultivated within the NPS boundaries is mostly deciduous forest. Common species in the area include green ash (Fraxinus pennsylvanica), Carolina ash (Fraxinus caroliniana), cottonwood (Populus deltoides), sugarberry (Celtis laevigata), sweetgum (Liquidambar styraciflua), pecan (Carya illinoensis), sycamore (Platanus occidentalis), tulip poplar (Liriodendron tulipifera), American elm (Ulmus americana) and roughleaf dogwood (Cornus drummondii). The forest floors are covered with poison ivy (Toxicodendron radicans), wild comfrey (Cynoglossum virginianum), mayapple (Podophyllum peltatum), exotic privet species (Ligustrum sp.), and spicebush (Lindera benzoin), and a moderate amount of woody debris. These woodlands are all secondary growth; no old-growth habitat remains. The right-of-way corridor for Section 3X of the Natchez Trace Parkway provides habitat for a variety of game and non-game wildlife species.

The quality of wildlife habitat in the Natchez region has declined considerably in recent years due to the fragmentation of habitat, urbanization, and agricultural development.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 3: Affected Environment September2002

3-1

Also, reductions in forest habitat and increases in open spaces have shifted wildlife populations and resulted in the creation of ecological zones favorable to edge-adapted species.

A total of fifty-two species of mammals have been identified within or near the project area (See **Appendix A** for Agency Letters). Large mammals include white-tailed deer, coyote, fox, and bobcat. Medium sized mammals include mink, otter, muskrat, weasel, raccoon, rabbit, skunk, beaver, armadillo, and opossum. The small mammal community includes various species of mole, shrew, vole, chipmunk, squirrel, rat and mice. Additionally, at least eight species of bats have been documented in the Natchez region.

Undisturbed bottomland hardwood forests, with their abundant moisture and high soil fertility, provide the most productive wildlife habitat in the region. Gray squirrels and bobcat thrive in this habitat type. Likewise, the raccoon is plentiful in areas of mature forests where water is available. Upland hardwood forest communities, especially in areas with Loess soils, are considered the second-most productive wildlife habitat (Mississippi State Game and Fish Commission, 1978). These areas provide high-quality habitat for deer and turkey populations. There are few forested areas in the region without a viable deer population.

The conversion of forests to open fields has accelerated with increasing regional demand for crop and pasturelands, and this has had significant impact on wildlife population dynamics. The natural wildlife population that once occupied the forest has shifted to those species that prefer open areas that are plowed, mowed, or burned. Habitat for game species, such as deer, quail, dove, and rabbit, is enhanced by these actions. Turkey populations are negatively impacted when large tracts of land are deforested and converted to agricultural uses.

Both cougar and black bear are rarely sighted within the region, although bear sightings are increasing in southwestern Mississippi. The project area is within the Louisiana black bear's historic range, however, the bears are considered extremely rare in the state (since the beginning of the 20th century). Refer to the subsequent section on threatened, endangered, and special concern species for additional information regarding the black bear. One of the most

notable exotic species in the project area is the nutria. It has become well established in the region, preferring marshland and waterway habitats, but also using inland sites.

The bird community in the project area is mostly neotropical migrant and resident species that are edge-adapted or edge-tolerant. Some species include the mourning dove, mockingbird, towhee, indigo bunting, blue jay, cardinal, brown thrasher, red-bellied woodpecker, quail, wild turkey, and a variety of warblers, vireos, and ducks. The project is within the Mississippi flyway, which is a major bird migration route. Waterfowl use this corridor during the cooler winter months, making the bottomland hardwood forests near water an important habitat for waterfowl species. The conversion of these seasonally inundated habitats to dry, open fields has reduced the extent and quality of habitat available. The predominant waterfowl species in the area are mallards and wood ducks. Other water birds include the snowy egret, great blue heron, and Canada goose. Birds of prey include the turkey vulture, Cooper's hawk, broad-winged hawk, red-tailed hawk, and screech owl.

There are ninety-four documented species of toads, frogs, salamanders, alligators, lizards, snakes, and turtles in the Natchez region (Appendix A). They represent 71 percent of all the species documented within the state. The largest species group is snakes (44 percent), followed by frogs and toads (17 percent), turtles (16 percent), salamanders (12 percent), lizards (10 percent), and alligators (<1 percent). Of the species documented, approximately 63 percent are common throughout the state. A total of 18 species (19 percent) are commonly found in southern Mississippi. The red salamander and the southern coal skink reach their westernmost limit in the loess hills of the Natchez vicinity.

Game and sport fish populations include largemouth/white bass, white/black crappie, bluegill, sunfish, yellow bullhead, and channel catfish. Other species in the St. Catherine Creek watershed include river carpsucker, stoneroller, shiner, bluntnose minnow, darter, and western mosquitofish.

Rare, Threatened and Endangered Species

No federally listed endangered or threatened species, candidate species for listing, or their habitats are known to occur within the proposed project area. In 1996 the project area was surveyed for these species and their habitats, but none of these species or their habitat were found. The Louisiana black bear, a federally listed threatened species, is known to occur in portions of Mississippi. The project area is within the bear's historic range. However, the Mississippi Department of Wildlife, Fisheries, and Parks advised that there are no recent records of the black bear occurring in the vicinity of the project area. Although an occasional transient individual may cross the project area, such occurrences would be incidental. Due to the level of the development in the surrounding area, the project area is not considered suitable habitat for the species, nor does it serve as a dispersal corridor (NPS, 1998).

The Mississippi Department of Wildlife, Fisheries and Parks, Natural Heritage Program has identified three plant and one animal species that are considered significant or rare in the state and might occur within the project area. The four significant species have no state or federal protective status, but are considered meaningful to the project area's natural environments. These species are the fetid trillium (Trillium foetidissimum), considered to be rare and uncommon in the State; the Florida Keys hempvine (Mikania cordifolia), considered to be rare but having a secure population in the State; the stalked Adders-tongue (Ophioglossum petiolatum), considered as having a secure population in the State; and the Quachita map turtle (Graptemys ouachitensis), with an uncertain status but presumed to have a secure population in the State. Refer to the Agency letters in Appendix A.

Surveys for the plant species were conducted by the National Park Service in September, October, and November 1996. Although two of the three plant species, fetid trillium and stalked Adders-tongue, were not found, the presence or absence of the species within the project areas could not be concluded due to the timing of the survey. In September, October, and November the plants have no aboveground parts, so even if the plants existed in the survey area they would not have been observable.

Scattered clumps of the rare hempvine (Mikania cordifolia) were found within the project area. The opinion of the surveyors is that less than 200 hempvine plants exist within the project area.

Wetlands

Surveys for wetlands along most of Section 3X of the Natchez Trace Parkway were completed in 1994 and were revised and updated for some areas in 1997. A wetland investigation for the remainder of the 8.6-mile project area between Old Route 84 & 98 to one half mile north of the intersection with U.S. Route 61 was completed in the spring of 2001. Vegetated wetlands are not extensively located within the project area. Previous reports and recent surveys have identified the vast majority of aquatic systems as riverine wetlands. The U.S. Fish and Wildlife's Cowardin classification system classifies these riverine wetlands as riverine lower perennial unconsolidated bottom (R2UB) and riverine intermittent streambed (R4SB) systems. The U.S. Army Corps of Engineers regulates these riverine systems as well as other Waters of the United States. Any discharge of dredged material into these systems are subject to review and require a Department of the Army permit pursuant to Section 404 of the Clean Water Act, and a Section 401 Water Quality Certification. Nationwide Permits may be used for certain types of activities that involve minor discharge into Waters of the U.S., including wetlands.

A palustrine forested deciduous wetland (PFO6B) area, associated with a palustrine unconsolidated bottom wetland (PUB2/3H), was identified within the study area. The wetland is located just north of St. Catherine Creek and Old U.S. Route 84 & 98, on the west side of the Parkway. The PFO and PUB, approximately 0.86-acre (37,600 square feet), is inundated and saturated, with areas of standing water. Soils within the wetland are mucky and have a matrix color of 10YR 5/1 with distinct reddish brown mottles. Wetland vegetation includes black willow (*Salix nigra*), water oak (*Quercus nigra*), smartweed (*Polygonum sp.*), poison ivy (*Toxicodendron radicans*), sweet gum (*Liquidambar styraciflua*), loblolly pine (*Pinus*)

taeda), honey locust (*Gleditsia triancanthos*), box elder (*Acer negundo*), japanese honeysuckle (*Lonicera japonica*), dewberry (*Rubus trivialis*), and dogwood (*Cornus sp.*).

A second palustrine unconsolidated bottom wetland exists within the project area. This open water area, approximately 0.11-acre (4,800 square feet), is located just north of Kaiser Lake Road on the west side of the Parkway. Loblolly pines and various tree saplings, as well as curly dock (*Rumex crispus*), smartweed species, and various grasses and sedges surround the waters edge.

Few small palustrine forested communities are also found within the study area. The dominant canopy species include oak, gum and elm trees. The remaining wetlands present within the study area can all be classified as riverine systems. Water is usually flowing within these systems. Upland islands or palustrine wetlands may occur in the existing channels, and may be included as part of the riverine system. The two subsystems of the Cowardin Classification system existing in the study area are lower perennial and intermittent. The lower perennial systems have a low gradient, slow water velocity, and a substrate of mainly sand and mud. Intermittent systems contain non-tidal flowing water for only part of the year. When water is not flowing, it may remain in isolated pools, or be completely absent on the surface (USFWS, 1979). These riverine systems are typically deeply incised and degraded.

PHYSICAL ENVIRONMENT

Air Quality

The Natchez area is designated a Class II area under the Clean Air Act (42 USC 7401). A Class II designation indicates the maximum allowable increase in concentrations of pollutants over the baseline amount (NPS Division of Air Quality, Washington Office). Class I areas allow the smallest levels of increase and generally include lands of special value such as some national parks and wilderness areas. Most of the nation is designated as Class II.

The State monitors for PM10 particulates including ozone (O3), carbon monoxide (CO), sulfur dioxide (SO2), lead, and acid precipitation. The State does not monitor for nitrogen dioxide (NO2). According to the Mississippi Department of Environmental Quality, Office of Pollution Control, the State has been in attainment for all criteria pollutants since the inception of the monitoring program. Attainment indicates that a criteria air pollutant meets acceptable health-based levels of the National Ambient Air Quality Standards (USEPA 1994).

Since 1993 ozone, and since 1999 primarily PM2.5 particulates, are the only pollutants monitored by the State in Adams County. Data from the monitoring station at the Natchez Water Works indicates that from 1998 through 2000 ozone was measured at levels below the allowable maximum amount. The standard is "0.12 ppm maximum one-hour concentration with an expected exceedance of no more than one day per year based upon a three-year average" (Mississippi Department of Environmental Quality, 1998-2000 data).

The monitoring station closest to the project area is in Vidalia, Concordia Parish in Louisiana, across the Mississippi River from Natchez. This station monitors for total suspended particulates (TSP), which is a non-criteria. Criteria air pollutants are those common air pollutants found throughout the United States. They are regulated by the Environmental Protection Agency based upon their effects on health, environment, or property. These pollutants are ozone, carbon monoxide, particulate matter, sulfur dioxide, nitrogen oxides, and lead (USEPA, 2001).

Ozone was the only pollutant in non-attainment in Louisiana in 1995. The closest monitoring stations in a non-attainment area are those in the vicinity of Baton Rouge. Three parishes in the Baton Rouge area are in non-attainment. Winds in the non-attainment areas are primarily from the southeast. According to MPS Air Quality Division, Washington Office staff, pollutants from the Baton Rouge area would be dispersed before reaching Natchez (NPS, 1998).

Most of the stationary sources of air pollution within 60 miles of the project area that emit more than 100 tons of a regulated pollutant annually are natural gas, paper, wood, and

electric services industries. Three sources – International Paper Company, Schuller International, and Fidelity Tire Manufacturing Company – are in the immediate Natchez area.

Water Resources and Quality

The St. Catherine Creek watershed, in which the project area is located, comprises 53 square miles of surface area. The drainage network is complex, with numerous first, second, and third order tributaries. The major streams that form these secondary drainage ways include Saragossa, Sandy, Pearl, Hardings, Spanish, Melvin, Zurhellen, Cemetery, and Bamouth Bayous; Sandy and Rules Branches; and Kittering, Perkins, and Languedoc Creeks. These tributaries contribute surface waters to St. Catherine Creek, which flows into the Mississippi River south of downtown Natchez and the bluffs. In addition to the natural drainage system, there are numerous drainage ditches that have been constructed along the creek and its tributaries to provide better surface drainage within the area. Most of the lands drained in the watershed consist of flat, alluvial deposits, with a much smaller percentage consisting of a hilly landscape. This series of flat lands, surrounded by rounded hills, reflect the extensive flooding and changing river meanders that have occurred in the past.

Most of the streams in the study area have been significantly affected by streambed destabilization and entrenchment processes originating in or near the Mississippi River and ascending upstream. As a result, streambeds have been lowered, stream banks have been steepened, and the volume and duration of storm water flows have been modified.

Water quality criteria for the State, adopted on November 12, 1974, specify general and minimum conditions followed by specific water quality criteria based upon use. The parameters for which criteria were established include dissolved oxygen, pH, temperature, bacteria, specific conductance, dissolved solids, taste and odor, phenolic compounds, and toxic substances. The streams along the Parkway are classified to meet the standards for fish and wildlife, i.e., they are "intended for fishing and for propagation of fish, aquatic life, and wildlife."

The U.S. Geological Survey has conducted limited sampling programs at eight sites between 1975 and 1989. Most data samples were collected between 1975 and 1976, with other periods of active data collection in 1980, 1985, and 1989. A total of 2,759 samples were analyzed for various physical, biological, and chemical constituents. Data are representative of surface water conditions during the time of collection and give insight into the quality of these waters (NPS, 1998).

Floodplains and Floodways

The 100-year flood has been adopted by the Federal Insurance Association (FIA) as the base flood for purposes of floodplain management. Floodplains are further divided into a floodway and floodway fringe. A floodway is the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood may be carried without substantial increase in flood heights. Floodway fringe is the portion of the 100-year floodplain outside of the floodway that may be filled without exceeding the maximum allowable flooding height for the 100-year flood. Minimum standards of the FIA limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. Development within floodplains and floodways is regulated by federal and state laws to reduce the risk of property damage and loss of life due to flooding, as well as to preserve the natural benefits of floodplain areas to the environment. Executive Order 11988 (Federal Register (FR) 42:101, May 23, 1977) requires all federal agencies to avoid construction within 100-year floodplains unless no other practical alternatives exist. The intent of this law is to ensure that floodplains and floodways are kept clear of obstructions and facilities that could restrict flow or increase flow rates or volumes during flood conditions.

St. Catherine Creek floods during major storms, which usually occur during the winter and spring. Serious flooding has been associated with tropical thunderstorms or hurricanes that infrequently occur in the area. Most floods are of short duration and cause minor damage within the watershed. Past major floods within the St. Catherine Creek drainage have been associated with major floods on the Mississippi River, such as those occurring during the

years 1973, 1975, 1979, 1983, and 1993. During peak flows on the Mississippi River, St. Catherine Creek has a tendency to pool and impound upstream from its confluence with the Mississippi. Significant flood events happen when the gage height of the Mississippi River reaches 59 feet above mean sea level, which corresponds with a gage height of 44.3 feet at Natchez. It is estimated that this gage height is reached about ten percent of the time.

Geology and Topography

The geologic development of Adams County has resulted from cycles of sediment deposition and erosion over tens of millions of years. The cycles of marine recession and land submergence were the result of depositional loading, the uplift of land masses, and the buildup and melting of continental glaciers. Adams County is underlain by six geologic formations of stratigraphic units: the Hattiesburg, Pascagoula, Citronelle, Natchez, Loess, and recent formations. These units are composed primarily of clay, silt, sand, and gravel, with some sandstone, clay shale, and clay stones. These six formations span the Miocene, Pliocene, Pleistocene, and Holocene ages.

The Hattiesburg formation, consisting of clay, claystone or mudstone, sand, and sandstone, is the oldest outcrop in the County; it was deposited in a shallow quiet sea during the Miocene time. The deposit can be up to 450 feet thick. A slow recession of the sea brought the Hattiesburg age to a close, and the Pascagoula age began. During the Pascagoula Age marine deposition moved southward, leaving Adams County above water. The low coastal plain was built up with debris from higher lands to the north. Clay, clay shale, sand, sandstone, and silt compose the Pascagoula formation, which is a maximum of 200 feet thick. The geologic deposition processes continued through the Pliocene time with the development of the Citronelle formation. This formation is a fluvial deposit (a deposit caused by the action of flowing water) and up to 50 feet thick, composed of gravel, conglomerate, sand, sandstone, and clay. In early Pleistocene time, glacier-born water swept southward to the gulf. Large bodies of rock waste were left behind, and the fierce action of the water and glacial drift modified the topography. The great Mississippi River trench is evidence of this process.

The Natchez formation is a result of Pleistocene fluvial activity. It is a terrace deposit of the Mississippi River that is composed of glacial outwash consisting of clay or clay shale, silt, sand, and gravel. Although the formation has been identified in only a few places, it represents the remains of a much larger alluvial terrace deposit. Maximum thickness is about 100 feet. The deposition of glacial outwash several times during the Pleistocene age provided plentiful amounts of silt and clay on the surface of the alluvial plain of the Mississippi River.

Wind blowing down and across the Mississippi trench swept up the fine glacial mill and re-deposited it on adjacent slopes. This geologic action produced the Loess formation, which is composed of massive silt as lime concretions, shells of land snails, and bones of Pleistocene mammals. The Loess formation reaches a maximum thickness of 92 feet. The uppermost stratigraphic unit in the project area is the recent formation of the Holocene age. It is comprised of mantle rock and alluvium. The mantle rock is waste rock that has been weathered from former bedrock and includes soil and subsoil. The composition of mantle rock varies from gravelly and sandy to clayey and sandy. The alluvium has been transported and deposited by water and primarily consists of waste rock. Alluvium may be relatively pure beds of sand, silt, clay, and gravel, but generally, one dominant rock material is mixed with a small proportion of one or more of the other rock materials. Maximum thickness of the formation is 200 feet.

Adams County is in the Loess Hills belt and is dominated by features formed from soil erosion. Where the loess is thick and slopes are steep, the topography is unusually rugged. Another unusual feature of loess topography is the number of vertical-walled coves found in the face of a river bluff. These huge deep hollows are formed by surface erosion and groundwater sapping of underlying sands, causing landslips. Deep stream valleys with steep side slopes incise the gently rolling upland surfaces of the project area. Relief between valley bottoms and upland surfaces can vary as much as 200 feet, although stream valleys of this depth have not been observed within the project area. The decrease in elevation from nearby uplands occurs in a relatively short distance, which causes rapid water runoff and severe erosion (NPS, 1998).

Soils

Soils in the Adams County area were derived from a variety of parent materials including alluvium, marine deposits, and loess. These soils, deposited by the Mississippi River on the river's alluvial plain, range from coarse sand to clay; whereas, the alluvium deposited by tributaries of the river are predominantly silt loams. Alluvial soils make up about 34 percent of Adams County soils. About five percent of the County's soils were formed in marine deposits and consist of sands and clays. About 61 percent are from loess parent material. Loess is composed primarily of silt and contains shells of terrestrial snails. Most soil scientists believe that loess is a windborne (or eolian) deposit. Loess was first deposited on the alluvial plain of the Mississippi River and later carried by wind and re-deposited on older geologic formations nearby. These deposits formed a comparatively level plain that was later incised by streams to form topography ranging from nearly level to steep.

The loess cover is thick and calcareous bordering the floodplains of the Mississippi River. Along the Natchez bluff it is typically 50 to 60 feet thick. The loess mantle progressively decreases in thickness away from the bluff and becomes more acidic in the eastern part of the County (SCS 1970). The identification, detailed description, and mapping of soils in the project area are based on soil surveys and data prepared by the Natural Resources Conservation Service of the United States Department of Agriculture (USDA).

The most common soil in the study area is the Memphis silt loam. The mapping units are MeA, MeB2, MeC2, MeD2, MeF2, and MeF3. These are deep, well drained soils, especially those on ridge tops and the upper parts of drainage ways. The slope varies from 0 to 60 percent with severe erosion occurring between the 5 to 60 percent slopes. The native vegetation consists of loblolly pine and upland hardwoods.

The Morganfield series (Mo) consist of well-drained soils located on the flood plains of small streams and at the edge of the flood plains of the Mississippi River. Slopes vary from 0 to 2 percent and the native vegetation consists of bottomland hardwoods, vines and canes. Gullied Land (Gu) soil series consist of areas in which large and small gullies have formed.

Except in small areas between the gullies, the soil profile has been destroyed. The slope varies from 5 to 50 percent. The Collins series (Co) consist of deep, moderately well drained soils located on narrow flood plains. The slope varies from 0 to 2 percent. The native vegetation consists of bottomland hardwoods and canes. This soil is listed as a hydric soil in the *Hydric Soils of the United States* (USDA, 1991). The Tippo Silt Loam (TaA) consists of poorly drained soils with a 0 to 3 percent slope. The native vegetation consists of loblolly pine and upland hardwoods. Lastly, the Falaya series (Fa) can be found within the Natchez Trace Parkway study area. They consist of poorly drained soils located on both narrow and broad flood plains. Slopes vary from 0 to 2 percent, and the native vegetation also consists of bottomland hardwoods and vines, canes, and underbrush. This is another soil listed as being hydric.

NOISE

Parkway Noise Levels

The study area is primarily serene and tranquil, with the major source of noise near the Natchez Trace Parkway being vehicular traffic. Noise measurements were taken south of Loess Bluff near the existing terminus of the Parkway. In the Loess Bluff location there is dense vegetation within the right-of-way providing a buffer between the roadway and any adjacent land use. The noise measurements near Loess Bluff were taken in October 1994, when there was vegetative cover. These measurements were taken 20 feet from the roadway edge. One noise measurement was taken from 8:00 a.m. to 4:00 p.m., and had a Leq* for this period of 52.8 dBA. Another measurement was taken on a different day from 4:30 p.m. to 8:30 a.m., and the Leq for this period was 49.7 dBA (NPS, 1998). As expected, the noise levels at night are lower than during the day, due to lower traffic volumes. ¹ To put this into perspective, a Leq of 50 dBA is typical of a quiet urban daytime setting. If this level of noise was indoors it would be comparable to a dishwasher running in the next room.

_

¹ * Leq is defined as the equivalent steady-state sound level, which in a stated period of time contains the same acoustical energy as the time-varying sound level during the same time period.

Natchez Area Noise Levels

In 1994 noise levels were measured at several sites in the Natchez area, in

addition to the Parkway. These sites were chosen because they represented land uses such as

residences, schools, and parks that are noise sensitive receptors. In addition, these sites provided

examples of a variety of traffic levels and background noise conditions.

Noise measurements were taken so that no buildings, topographic features, or

vegetation shielded the receiver from the major noise source. These measurements were taken in

October when there was vegetative cover. In general, sites measured near existing heavy traffic

roads ranged from 60 to 63 dBA, sites with light to moderate traffic ranged from 55 to 60 dBA,

and quieter rural and residential areas ranged from 40 to 55 dBA (NPS, 1998).

SOCIO-ECONOMIC ENVIRONMENT

Social Environment

Population and Housing

Natchez is the County seat and principal urban center in Adams County, with the

City accounting for over 50 percent of the County's population in 2000. Many people live just outside and adjacent to the City limits. The local economy reflects this residential pattern, with

the County's job base and income generation disproportionately located within or adjacent to

Natchez. Additionally, Natchez's location on the Mississippi River, with direct access to Vidalia

and other communities in Louisiana via U.S. Route 84, extends its economy to a geographic area

beyond the County's boundaries. For this reason, the County is the appropriate primary unit for

this socioeconomic analysis.

The socioeconomic conditions in Natchez and Adams County provide the context

for analyzing the demographic and economic consequences of the proposed alternatives.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment

Section 3: Affected Environment

September2002

3-14

context includes the current status as well as the historical trends of the area's population and the economic base.

The population of Adams County remained relatively steady during the 1960's and 1970's, varying between 37,500 and 38,000 residents. The County's population peaked in 1984 at 39,010, and has since declined steadily but slowly to 34,700 in 1994, and 34,340 in 2000. Adams County population declined 7.6 percent during the 1980's in contrast to the state as a whole, which experienced a 2.7 percent gain. The population in Natchez totaled 19,460 in 1990, down from 22,015 in 1980, and has dropped even more to 18,464 in the year 2000.

Environmental Justice

The Executive Order 12898 on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations is aimed at preventing minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects. Environmental Justice is intended to promote the fair treatment of people of all races, incomes, and cultures with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The Executive Order 12898 issued by President Clinton on February 11, 1994 requires agencies to:

- Focus attention on federal agencies for the human health and environmental conditions of minority communities and low-income communities with the goal of achieving environmental justice.
- Foster non-discrimination in federal programs that substantially affect human health or the environment.
- Give minority communities and low-income communities greater opportunities for public participation in, and access to public information on matters relating to human health and the environment.

Per capita personal income for Adams County, Mississippi (\$18,226) does not differ much from that of the state of Mississippi as a whole (\$18,098). In 1997, 22.6 percent of the population was living below poverty level in Adams County. In the City of Natchez, the

greatest percentage of the population is composed of African Americans. This demographic makeup is presented in **Table 2**.

Table 2: Racial Demographics, 2000, Natchez

Race	Number	%
White	8,158	44.2
African American	10,061	54.5
American Indian and Alaska Native	20	0.1
Native Hawaiian and Other Pacific Islander	7	-
Some Other Race	34	0.2
Two or More Races	117	0.6

SOURCE: U.S. Census Bureau, Census 2000.

Federal agencies must make achieving Environmental Justice part of their mission by identifying and addressing disproportionately high and adverse human health or environmental effects on minority populations and low-income populations in the United States.

Economic Environment

Employment and Economics

The economy of Adams County declined during the 1980s. The major reason for this economic decline was a shift in the structure of the County's job base from higher-wage, goods-producing activities to lower-wage, services-producing activities and a simultaneous decline in the number of jobs overall. Between 1980 and 1990 the number of jobs in Adams County decreased from 20,640 to 18,510, a decline of 10.3 percent. In comparison, the state's employment base increased by 9.9 percent over the same period.

Not only did the employment base shrink during the 1980s, but the types of employment in Adams County also changed. The number of self-employed workers actually

grew 17.4 percent while the number of wage and salary workers, persons working for someone else (the more formal type of employment), was decreasing 15.0 percent. The sectors that accounted for the major job losses included: mining, down 20.1 percent; manufacturing, down 28.9 percent; and, transportation, communications, and public utilities, down 42.5 percent. Several other important sectors had smaller decreases: finance, insurance, and real estate, down 4.7 percent; services, decreased 1.4 percent; and government employment declined 4.7 percent. Two sectors added jobs: construction was up 8.8 percent, and retail trade increased 9.6 percent. The unemployment rate in 1990 in Natchez was 12.4 percent, and in Adams County it was 12.2 percent. This compares to 8.4 percent for the state and 5.5 percent nationally in 1990.

The County's economy became increasingly dependent on services-producing activities for its income generation. This employment restructuring also was occurring elsewhere in the state with one important difference. While employment was shifting from goods to services-producing activities in Adams County during the 1980s, the number of jobs was also decreasing. At the state level, jobs increased in all sectors and were up 9.9 percent overall with goods-producing sectors gaining 8.3 percent and services producing sectors growing 16.8 percent.

The change in Adams County's economy is largely responsible for its loss of population during the 1980's. However, as a result of this population loss, the decrease in total personal income did not result in a decline in real per capita income. Per capita income in 1980 equaled \$12,900 (in 1990 dollars); in 1990, it was \$13,011, an inflation-adjusted real increase of 1.0 percent. In contrast, while per capita income statewide in Mississippi was slightly lower than in Adams County, it grew 14.6 percent in real terms over this 10-year period. Income levels in Adams County and Mississippi are lower and growing more slowly than income levels in the United States. These comparisons are presented in **Table 3**.

TABLE 3: Income Trends, 1980-1990

	Adams County		Mississippi		United States	
	1990	Percent Change	1990	Percent Change	1990	Percent Change
Per Capita Income	\$13,011	1.0	\$12,691	14.6	\$18,640	16.4
Mean Household Income	\$34,582	-9.7	\$35,808	6.4	\$50,455	12.0

SOURCE: NPS 1998

The Visitor Industry in Natchez

Natchez is a visitor destination owing primarily to its cultural and historic sites and events. These attractions have long appealed to tourists who have in turn contributed to the area's economy through their spending for lodging, meals, and retail purchases. This industry has been characterized by its seasonality and the service-type jobs that it has supported. Natchez's history-based visitor industry has been augmented by the addition of riverboat gaming in 1993.

The primary tourist attractions in the Natchez area are the historic mansions and plantation houses that reflect the antebellum history of Natchez. Many of these mansions offer bed-and-breakfast services or are open daily on a year-round basis as part of tours; other homes are open only during the Natchez spring and fall pilgrimages. In 1996 visitors contributed nearly \$5.3 million in actual expenditures to the Natchez economy for the year's three pilgrimage events. A variety of antique shops, restaurants, and cultural features downtown and in Natchez Under-the-Hill, also attract visitors.

The Isle of Capri Casinos, Inc. provides 515 slot machines and 31 gaming tables on the Mississippi River at the foot of Silver Street. The casino also includes live entertainment, nightclubs, and a variety of 24-hour dining facilities offering food and alcoholic beverages. Other special activities and annual events also help attract visitors to Natchez - the Great Mississippi River Balloon Race, the Opera Festival, the Copper Magnolia Festival, the Natchez

Bicycle Classic, the African-American Heritage Program, the Natchez Pow-Wow, Mardi Gras, a Victorian Christmas, and many other events held throughout the year.

There are no official records documenting the number of out-of-town visitors that are attracted to Natchez annually or the magnitude of their spending. However, based on hotel and restaurant tax revenues and sample tourism expenditure estimates, the economic importance of the visitor industry can be determined. In 1994 the economic impact of the visitor industry was forecast to total an estimated \$110.6 million. This magnitude of outlays would support a total of 2,730 jobs in the visitor industry inclusive of other local jobs supported by the \$38.7 million in earnings of these workers that is recycled within the local economy.

The visitor industry is a major sector within Adams County economy, as a source of jobs, earnings, and total output. The total direct and indirect job effects of this industry accounted for an estimated 14.4 percent of the County's total 19,100-employment base in 1994. As a share of the estimated 1994 gross county product, totaling \$735.7 million (in 1994 dollars), the visitor industry's total of \$110.6 million in direct and indirect outlays represented 15.0 percent of the value of all goods and services produced locally. Relative to the County's other major sectors, the visitor industry ranks third, behind manufacturing and government, in terms of its overall contribution to the area's gross county product.

Land Use

The Natchez Trace Parkway is under the administrative jurisdiction of the National Park Service. Within the Parkway boundaries, and exclusive of the Parkway motor road, the land use is dominated by forest with scattered agricultural fields and open space. The proposed project study area consists of forest and open space. Surrounding the southern section of the study area, within the City of Natchez and near Liberty Road, is commercial and industrial land uses. The area has mostly residential and agricultural land uses beyond the Parkway boundaries. U.S. Route 61 runs roughly parallel to the Parkway at distances of approximately 1,000 to 3,000 feet. General commercial establishments with scattered residential areas are located along U.S. Route 61.

CULTURAL RESOURCES

In Colonial America the waterways initially afforded the easiest means of communication and trade. Having crossed the Atlantic Ocean, French, Spanish, and British explorers and settlers used rivers to penetrate the wilderness, trade with native populations, and establish settlements. As farms and plantations developed along the eastern rivers, rivers grew in their importance as transportation routes of people and goods. Settlement west of the Appalachian Mountains during the 1790s firmly established the Mississippi River system as part of the nation's transportation network. Staples from the Ohio Valley were floated down-river to Natchez or the levees of New Orleans for shipment overseas or for distribution by coastal vessels to the rest of the South and the East. Until the advent of the steamboat, the Mississippi River bore essentially downstream traffic. The river's current and the hazards of navigation made it laborious, if not impossible, to pole a flatboat upstream. Because the return trip had to be made overland, boatmen sold both cargo and boat, and walked or rode home on horseback. The Natchez Trace became the boatmen's path back to Nashville.

Travel on the Natchez Trace, never more than a narrow, cleared road, was by foot, horseback, or horse-drawn vehicle. The trip from Natchez to Nashville frequently required three or more weeks. Until attempts were undertaken during the first decade of the 19th century to transform the Natchez Trace into a serviceable road, many segments of the Trace were less a fixed route than a series of seasonal trails.

During the early 19th century, steam power began revolutionizing transportation on the nation's vast interior river system, precipitating the decline of the Natchez Trace. The steamboat could be propelled upstream against the mightiest river current, and both transportation costs and transit time were substantially reduced. By the 1830's the steamboat dominated traffic on the Mississippi River, and the Natchez Trace had fallen into disuse. Over the ensuing decades the grasslands and forests reclaimed much of the Natchez Trace. Today, only remnants of the historic Natchez Trace exist. Section 3X of the Natchez Trace Parkway in

fact does not have any remnants of the historic Natchez Trace. This area contains mostly prehistoric camps, farmsteads, and tenant farms.

Consideration of effects to cultural resources is mandated by the National Environmental Policy Act and by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470-470w-6). The provisions of Section 106 require federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on such undertakings. The procedures for implementing Section 106 are contained in 36 CFR Part 800, "Protection of Historic Properties."

These regulations define a federal undertaking as an action that is proposed by a federal agency (or a project proposed by others that would receive funding, permits, licenses, or authorizations from federal agencies) that has the potential to affect historic properties. Historic properties are defined as properties that are either listed in or eligible for listing in the National Register of Historic Places (NRHP), including buildings, structures, historic districts, objects, sites, or archeological resources. The regulations implementing the NRHP may be found in 36 CFR 60.4. In addition, Section 106 of NHPA requires that those agencies consult with the State Historic Preservation Office (SHPO) in determining if previously unidentified historic properties exist in the area of potential effects.

Historic Architectural Resources

Field investigations and research revealed three historic architectural resources located in the vicinity of, but not within, the project area, including: the Selma Plantation House; the Propinquity Plantation House; and Sweet Auburn. The c.1811 Selma Plantation House (MSHPO survey #001-WSH-6005) is listed in the National Register of Historic Places. Propinquity Plantation House (#001-WSH-6004) is considered eligible for National Register listing by the MSHPO. The National Register eligibility of Sweet Auburn (#001-WSH-0009)

has not been determined. One architectural resource, remains of the early 19th century Elizabeth Female Academy, is a National Register-listed site located within the study area (Photo 3).

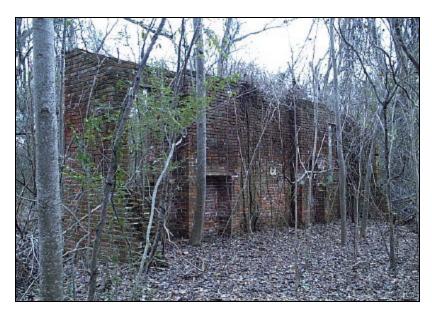


Photo 3: Elizabeth Female Academy

Archeological Resources

In 1924 archeological investigations of the Natchez area began in earnest, with a broad survey of mound sites in Adams County conducted by Warren K. Morehead. Eighty-two sites were located during Morehead's survey, and twenty-two of those were tested (Neitzel 1965). In 1930, Moreau B. Chambers of the Mississippi Department of Archives and History (MDAH) undertook the first professional archeological investigation of the Grand Village site, located outside of downtown Natchez. Subsequent studies by Chambers, James A. Ford, and Henry B. Collins, Jr. proved that the Grand Village Site was the Fatherland Site described in several historical accounts. The excavations at this site during the 1930s laid the foundations for historical archeology in the Lower Mississippi Valley (Brown 1985:4).

George I. Quimby revisited the Grand Village Site in the 1940s and 1950s, followed by additional investigations by Robert S. Neitzel in the 1960s and in 1983. Expanding interest in the cultural history of the Natchez area led to broader investigations of additional sites

located away from Grand Village. To investigate the effects of European influence, the nature of changing demographics between late prehistoric and early historic periods, and the ultimate abandonment of sites and reintegration into other cultural groups, the Lower Mississippi Survey conducted numerous investigations of sites in 1971 and 1972 (Brain 1978; Brown 1973; Brown and Brain 1984; Steponaitis 1974, 1981; Williams and Brain 1979).

John Ehrenhard of the Southeast Archaeological Center (SEAC) of the National Park Service (NPS) conducted one of the first professional archeological surveys of the Section 3X corridor in 1976. The report produced from that survey describes one historic and five prehistoric sites, four of which are located within the terminus of 3X (Ehrenhard 1976). The following year, Christopher Hamilton of SEAC conducted another archeological survey of 3X. Hamilton determined that four of the five prehistoric sites identified by Ehrenhard were located outside the NPS-owned property, while the fifth prehistoric site only partially extended into the property (Hamilton 1977). In Hamilton's report, a newly discovered site, known as the French Dwelling Site, was identified. James Atkinson of SEAC conducted three seasons of archeological investigations of 3X in 1988, 1990, and 1991. The field work consisted of initial survey and limited testing, further survey and sub-surface evaluation investigations of known sites, and more comprehensive investigations of the Parkway construction impact zones at the St. Catherine's Creek and Perkins Creek Sites. Atkinson concluded that Mississippian period site 22-AD-903 (3X-23) was potentially eligible for the National Register of Historic Places. He noted that the St. Catherine Creek site (22-AD-908, also known as 3X-35) had been salvaged.

As mentioned above, the Lower Mississippi Survey (LMS), under the direction of Ian Brown, visited sites in Natchez Bluffs area, as well as several sites in, or near, the 3X portion of the Parkway. This was completed as part of the effort to establish site chronologies and expand upon previous interpretations in the Natchez area undertaken in the early 1980's. Two of the sites investigated by the LMS are within the 3X portion of the Parkway. Both sites are considered eligible for listing in the National Register of Historic Places for their potential to yield significant information on the prehistoric and historic Natchez Indian culture.

Native American sites ranging from Archaic through historic Natchez have been recorded in the 3X Section, including one unusual contact period site. The most recent archeological investigations of Section 3X have been conducted by SEAC. The goal of the SEAC investigations has been to ensure that the proposed corridor for the uncompleted segment of the Parkway has been systematically surveyed. Previously recorded sites in Section 3X were revisited by SEAC in 2000 and 2001 to pinpoint their locations and check the accuracy of site records maintained by the MDAH. Few of the sites are large, and most were occupied by tenant farmers in the 19th and early 20th Centuries. Some may have been used by African American slaves before the Civil War. Two historic sites associated with the early French inhabitation of the area are the French Dwelling site, which has been determined eligible for listing on the national Register, and the Greenfield (Locale I) site, which is potentially eligible. Several sites were evaluated and, in 2002, data recovery was conducted at two sites. A number of these sites studied are also within the trail Project Area.

A *Draft Cultural Resources Assessment* was prepared for the National Park Service on the Natchez Trace Multi-Use Trail study area in October 2001. In 2002, SEAC conducted a Phase I/II survey of portions of the proposed multi-use trail route to identify and evaluate any additional cultural resources that might be impacted by trail construction and use. Five potentially National Register-eligible sites have been identified within the Preferred Alternative's project area, in addition to one listed site and six sites evaluated as not significant. Jay Sturdevant has prepared the "Trip Report and Preliminary Recommendations Following Phase I/II of the Natchez Trace Parkway 3X Multi-Use Trails Survey, February 11-March 8, 2002." In response to this report, the MDAH has concurred that among those sites in the trail Project Area, site 22-AD-897 is potentially eligible, and sites 22-AD-908, 914, and 1003 are eligible for the National Register. SEAC's survey and analysis has been closely coordinated with the Parkway and the MDAH.

VISITOR USE AND EXPERIENCE

Background

Although the Parkway is not yet open to the public within the project area, driving

along the Natchez Trace Parkway would be the primary experience for most visitors following

its projected 2005 opening. There has been an increasing awareness and demand by Park visitors

and local communities/organizations for alternative methods of experiencing the scenic qualities

of the Natchez Trace. This has placed greater demand on increasing recreational opportunities

surrounding the Parkway. Currently no trails exist within the project area for visitors to use.

There is no opportunity for roller skating, jogging, or hiking. Only bicyclists may currently use

the Parkway motor road.

Visual Experience and Aesthetics

The assessment of the potential visual impact of the multi-use trail project is

comprised of two distinct parts: the baseline survey; and, the visual impact assessment. For the

visual impact assessment, the assessment area includes the entire visual envelope, which includes

all areas from which the multi-use trail can be seen. This area forms the view shed formed by

natural and manmade features such as existing ridgelines, built development, and areas of forest

and large trees.

The baseline survey of all views toward the multi-use trail is undertaken by

identifying:

• The visual envelope described above, including both open and partial views of the

Trail.

• The visually sensitive receivers within the visual envelope whose views would be

affected by the project. In general, potential visually sensitive receivers include views

from residences, views from workplaces, and views from public areas.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 3: Affected Environment

For the visual impact assessment, consideration is given to both the magnitude of the change caused by the alternatives, and the sensitivity of the view to the change. Factors that affect the magnitude of the change include:

- The compatibility of the project with the surrounding landscape forming the view
- The duration of the impact
- The scale of the development
- The reversibility of the change
- The viewing distance
- The potential blockage of the view

Factors affecting the sensitivity of receivers for evaluation of visual impacts include:

- The value and quality of existing views
- The availability and amenity of alternative views
- Type and estimated numbers of individuals in the receiver population
- The duration or frequency of view, and,
- The degree of visibility

The significance of the visual impact is a product of the magnitude of the impact and the receiver sensitivity to the negative or beneficial impact. A significant impact is that where the proposal would cause significant deterioration or improvement in the existing landscape quality, a moderate impact is where the proposal would cause a noticeable deterioration or improvement in the existing landscape quality, a slight impact is where the proposal would cause a barely perceptible deterioration or improvement in the existing landscape quality, and a negligible impact is where there is no discernible change in the existing landscape quality.

Also considered in the visual impact assessment are mitigation measures that can be implemented to reduce the magnitude of the impact, and the residual impacts, which are those that remain after the proposed mitigation measures have been successfully implemented.

Baseline Survey

The existing landscape of the study area is rural in nature, with varying degrees of open field and forest. At the southern terminus of the project the National Park Service right-of-way extends through open space adjacent to recreation land in the town of Natchez. Heading in a northerly direction, the right-of-way crosses St. Catherine Creek and Melvin Bayou. These crossings are characterized by severely eroded and steep river channels, bordered by mixed deciduous forest.

From just north of Melvin Bayou, across County Road A and then County Road P the right-of-way consists primarily of open field with scattered tree groupings. From that point north to Perkins Creek the right-of-way is characterized by dense forest on rolling topography dissected by steep ravines of the Loess soils. Perkins Creek in the study area is typically a 25-foot deep incised river channel, bordered by forest. Between Perkins Creek and the end of the completed Parkway the landscape alternates between open field and forest on rolling topography, crossing two steep ravines and County Road B. Several residences have a clear view of the cleared Parkway right-of-way in this section.

From the southern end of the existing Parkway north to U.S. 61, the Parkway right-of-way is primarily through mixed deciduous forest. The width of the area adjacent to the Parkway that is maintained as mowed grass varies, depending on the extent of cut and fill that was required for construction of the Parkway. The Parkway and trail crossing under Old US 84/98 would be visible in this section, as would be the crossings of Kaiser Lake Road and Crossroad B. The steep river channels of Winding Creek and the North Fork St. Catherine's Creek would be within the view shed of the Parkway and the multi-use trail in this section.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL ENVIRONMENTAL ASSESSMENT SECTION 4: ENVIRONMENTAL CONSEQUENCES

ENVIRONMENTAL SETTING

No-Build Alternative

The No-Build Alternative would have no impact on the environmental setting of the Natchez Trace Parkway surroundings, as described in the Affected Environment Section.

Parkway Shoulder Alternative

The environmental setting for the Parkway Shoulder Alternative is exactly that of

the Natchez Trace Parkway as described in the Affected Environment Section.

Preferred Alternative

The Preferred Alternative would also have a similar environmental setting as the

Parkway. The surrounding environment would remain essentially the same. However, much of

the trail would be separated both physically and visually from the Parkway, and would be located

primarily in a forested setting.

Conclusion

Under the No-Build and Parkway Shoulder Alternatives, no changes and therefore

no impairment to the Parkway's environmental setting would occur. The Preferred Alternative

would also not impair the environmental setting, as the separation of the trail from the Parkway

would result in a positive impact whereby trail users would have a more peaceful, natural

environment to enjoy.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

NATURAL RESOURCES

Terrestrial and Aquatic Environment

No-Build Alternative

The No Build Alternative would not impact any terrestrial and aquatic

environments. The surrounding forest, streams and open space would not be disturbed.

Parkway Shoulder Alternative

The Parkway Shoulder Alternative would have minor impacts on the surrounding

terrestrial and aquatic environments. The impacts associated with construction of the trail would

be the same as those associated with construction of the Parkway motor road for the southern

portion of the Parkway not yet constructed.
The northern portion of the Parkway motor road

already constructed, would pave five feet of the already existing six-foot shoulders to

accommodate the trail, with no disturbance to the existing habitats. Additional disturbance

would be anticipated at bridge crossings that currently exist and would need widening, however,

there would be negligible additional fill required to widen these bridges. An estimated 15 acres

of land disturbance would be likely with the Parkway Shoulder Alternative, however this is not

in addition to construction of the motor road.

The majority of land within the Study Area is forested. However, the impacted

areas for construction of this alternative from U.S. Route 61 south to New Route 84 & 98, are

already cleared for the existing roadway. For construction of the southern portion of the motor

road, there would be no additional disturbance to forest for the trail. Impacts to any animal

species within these areas would be temporary, and not impact the populations. Species would

likely return to the area once the disturbance of construction is gone. Those species present

within the Study Area have been described in detail in Section 3 of this document.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Preferred Alternative

The Preferred Alternative would have minor impacts on the surrounding terrestrial and aquatic environment. In some areas the trail would join the Parkway, requiring extension of the bridges to cross roadways or streams. At these locations the impacts would be the same as those resulting from Parkway motor road construction at the southern end of the Study Area, and similar to the impacts for the Parkway Shoulder Alternative for the northern end of the Study Area. An estimated 50 acres of land disturbance would be anticipated from construction of the Preferred Alternative. Approximately 330,000 cubic yards of excavation would be required, and approximately 395,000 cubic yards of fill.

The majority of the Study Area is deciduous forest and some areas of open space. Minor shifts in the trail alignment would be required during final design to minimize impacts to any specimen trees within the forest, and any streams crossed. Approximately 40 acres of forest impacts would be anticipated from this alternative, however, once construction is complete, the area disturbed adjacent to the trail would be improved with maintenance and plantings. Impacts to any animal species within the area of this alternative would also be temporary, and not impact the species populations. Species would likely return to the area once the disturbance of construction is gone.

Conclusion

Under the No-Build Alternative, there would be no change and therefore no impairment to the Natchez Trace Parkway's surrounding terrestrial and aquatic environment. The Parkway Shoulder Alternative would result in negligible effects to open spaces, forest edges, and streams for modification of existing parkway bridges, and no impacts would occur in addition to those by the proposed motor road construction. Minor impacts would occur under the Preferred Alternative to portions of forested areas, streams and open spaces, however implementation of either build alternative would not impair the Parkway's terrestrial and aquatic

environment. **Table 4** provides a brief summary of approximated impacts to the terrestrial and aquatic environments.

Table 4: Natural Resources Impacts

	Parkway Shoulder	Preferred		
	Alternative	Alternative		
*Riverine Wetlands	.17 acre	.15 acre		
Forest	0	40 acres		
*Total land disturbance	0	50 acres		
Cut/Fill	Negligible	330,000 cubic yards of cut		
		395,000 cubic yards of fill		

^{*}Wetlands impacts are described under the Wetlands heading and land disturbance is further described in the Geology and Topography heading of Section 4 of this EA.

Rare, Threatened and Endangered Species

No-Build Alternative

The No-Build Alternative would not result in any construction within the Project Area, and therefore no known rare, threatened or endangered species would be impacted as a result of this alternative.

Parkway Shoulder Alternative

No known rare, threatened or endangered species or their habitat are found within the proposed work area, and therefore no adverse impacts would result. There are, however, four Mississippi state-listed species of special concern, three plant species and one turtle species. In areas with reported occurrences of these species, the Mississippi Department of Wildlife, Fisheries and Parks requests that construction activities not destroy these species or their habitats (Refer to **Appendix A** – Agency Correspondence). One species of concern, the Ouachita map turtle, is found in the Mississippi River and does not range very far along the Mississippi River

tributaries. Its habitat would not likely be affected by trail construction. The Florida Keys hempvine is found in swamps and wet woods, and its habitat would also remain unaffected. The Fetid trillium is abundant in loess ravines under rich hardwoods in areas south of U.S. Route 84 & 98 and east of St. Catherine Creek in the Natchez vicinity. Habitat of the stalked Adderstongue is moist meadows and shady clearings, and if present, would likely be limited to openings on the borders of fields or woods and on the mowed road right-of-ways of the completed portions of the Parkway. Surveys for the plant species were conducted by the National Park Service in September, October, and November 1996. Although two of the three plant species, fetid trillium and stalked Adders-tongue, were not found, the presence or absence of the species within the Project Areas could not be concluded due to the timing of the survey. During these months the plants have no aboveground parts, so even if the plants existed in the survey area they would not have been easily observable.

Preferred Alternative

No known rare, threatened or endangered species would be impacted by the Preferred Alternative. However, the same concern exists to protect Mississippi state-listed species of concern and their habitats during construction. Potential impacts to these species are the same as the Parkway Shoulder Alternative.

Conclusion

Rare, threatened or endangered species would remain unaffected and therefore not be impaired under the No-Build, Parkway Shoulder, and Preferred Alternatives. A survey for the four species of special state concern should be conducted in the spring before construction activities commence, in order to definitively determine the presence or absence of the species. Should Mississippi state-listed species of special concern be found within the Project Area, measures would be taken to avoid these species or their habitats during construction.

Wetlands

No-Build Alternative

No wetland systems would be impacted as a result of this alternative.

Parkway Shoulder Alternative

Minor temporary impacts may occur to several lower perennial and intermittent riverine wetland systems throughout the Project Area. Impacts would be related to construction of the Natchez Trace Parkway bridges crossing over streams. Bridge piers placed within the riverine systems to support the structure would need to be installed. A total of twelve crossings would be needed for the Parkway motor road and therefore the Parkway Shoulder Alternative, and of those twelve, four bridges would be constructed over five riverine systems. These five systems are St. Catherine Creek and Melvin Bayou at the southernmost extent of the Project Area, Perkins Creek, another section of St. Catherine Creek, and the North Fork tributary of St. Catherine Creek. Several minor tributaries would also be impacted by the grading and filling required for Parkway construction. These systems would be culverted and fill placed over the culverts for trail construction. Within the southern portion of the alternative, where the motor road has not yet been built, there would need to be approximately ten of these structures. In total, approximately 750 linear feet of riverine wetlands would be spanned by bridges or culverted (0.17-acre/7,500 square feet, respectively). The majority of these systems would not have impacts to any vegetation within the wetland since they are mostly riverine systems. No palustrine unconsolidated bottom wetland systems (ponds) would be disturbed. All such open water areas have been avoided.

Preferred Alternative

Approximately 25 riverine systems would be crossed for the construction of the Preferred Alternative. This alternative would use five Parkway bridges over three riverine

systems and require an additional 22 structures (bridges and culverts) to cross streams and roads. When bridges would be used they would span the entire riverine systems, avoiding permanent impacts. Only temporary disturbance would occur from construction equipment. structures would likely be pre-fabricated bridges, and the determination of use between these structures and the use of culverts would be made during final design. In the southern section of the Project Area in which the Parkway has not yet been built, impacts to St. Catherine Creek, Melvin Bayou, and Perkins Creek would have a localized disturbance area since the trail would be attached to the Parkway bridges spanning these systems. In the southern section in which the trail is separate from the Parkway, the impacts as a result of trail construction would be separate from and in addition to the impacts from Parkway construction. The North Fork of St. Catherine Creek would require a separate structure for the multi-use trail. Since the Parkway has already been built in this area, these impacts would be minor. All impacts to wetland systems for this alternative are temporary. No systems would be filled except for that area needed for the installation of culverts. The majority of these systems would not have impacts to any vegetation within the wetland since they are mostly riverine systems. No palustrine unconsolidated bottom wetland systems would be disturbed for this alternative, and all open water areas have been avoided.

The number and location of culverts, and the number and location of bridges, would be determined during final design and approved by the Corps of Engineers, as part of the 404 permitting process. Approximately 650 feet of riverine wetlands would be spanned or culverted (0.15-acre/6,500 square feet, respectively). For the small riverine systems to be crossed by bridges, the bridge abutments would be constructed outside of the ordinary high water mark for that system, thereby avoiding any impacts.

Conclusion

The No-Build Alternative would not impair Parkway wetland resources or values within the Study Area. Construction of the Parkway Shoulder Alternative would result in minor negative impacts to several riverine systems that would need to be bridged or culverted for

construction of the Natchez Trace Parkway. Although impacts would occur as a result of this alternative, there would be no impairment to the wetland systems within the National Park Service lands. The Preferred Alternative would also not impair any wetland systems within the Study Area. All impacts to the existing riverine wetland systems would be temporary and minor.

A jurisdictional determination of the Project Study Area has established that jurisdictional waters do exist and therefore both the Parkway Shoulder Alternative as well as the Preferred Alternative would require a permit from the Army Corps of Engineers.

PHYSICAL ENVIRONMENT

Air Quality

No-Build Alternative

No air quality impacts would result from the No-Build Alternative.

Parkway Shoulder Alternative

Negligible and temporary air quality impacts would occur within the Project Study Area during construction of bicycle lanes on the Parkway, due to emissions from construction equipment and dirt. Under this alternative, the trail would service only bicycles and no motorized vehicles of any kind. No harmful substances would be emitted. However, with bicyclists utilizing lanes directly adjacent to the Parkway, there would be unpleasant odors or fumes affecting the trail users from vehicles on the motor road. This is explained in more detail in the Visitor Use and Experience Section.

Preferred Alternative

Only minor temporary air quality impacts caused by fugitive dust and equipment

emissions are expected during construction of the preferred multi-use trail alignment. Use of the

trail itself would not produce any adverse air quality conditions.

Conclusion

With the exception of temporary air quality impacts caused by construction under

the Parkway Shoulder and Preferred Alternatives, no impairment to Parkway air quality would

occur under any of the alternatives.

Water Resources and Water Quality

No-Build Alternative

The No-Build Alternative would not impact any water resources and therefore not

impact water quality throughout the Study Area.

Parkway Shoulder Alternative

This alternative would have temporary negative impacts to water resources and

water quality. Construction of bridges spanning small riverine systems would require temporary

in-stream activity, and construction of bridges over larger systems such as Melvin Bayou, St.

Catherine Creek, and Perkins Creek may require bridge piers be placed within the channel of the

stream. Stream banks would not be permanently altered. An erosion and sediment control plan

would be prepared and included in the final construction plans. Implementation measures would

include: a) performing drainage and slope work to prevent erosion, and b) installing such

features as silt fences, straw bale dikes, and inlet protection. Caution would be used during

construction and all streams would be returned to their previous condition. These streams have

Natchez Trace Parkway Multi-Use Trail Environmental Assessment

Section 4: Environmental Consequences September 2002

already been significantly affected by natural and anthropogenic forces, creating steepened banks and altered flows.

Preferred Alternative

This alternative would also have temporary negative impacts to water resources and water quality. Construction of bridges spanning riverine systems would require temporary in-stream activity, but the stream banks would not be permanently altered. Construction of bridges over larger systems such as Melvin Bayou, St. Catherine Creek, and Perkins Creek may require bridge piers be placed within the channel of the stream just as the Parkway Shoulder Alternative. Again, an erosion and sediment control plan would be prepared and included in the final construction plans, requiring the contractor to stabilize all disturbed areas and minimize the discharge of sediment into the waterways.

Conclusion

No impairment to water resources and water quality would occur under the No-Build Alternative. Temporary negative impacts would occur under the Parkway Shoulder and Preferred Alternatives, however, through the use of erosion and sediment control plans and best management practices for construction of the bridges and culverts, the streams would be returned to their previous conditions. Therefore, the Parkway's water resources and quality would not be impaired by any of the alternatives.

Floodplains and Floodways

No-Build Alternative

The No-Build Alternative would not impact floodplains or floodways within the Study Area.

Parkway Shoulder Alternative

The Parkway Shoulder Alternative would cause minor and unavoidable construction impacts to the floodplains and floodways. Once constructed, all bridges as well as the motor road would be above floodplain elevations and therefore not have any impacts once all construction is complete. Potential effects associated with the installation of bridge piers and piles would be addressed during final design through the use of erosion and sediment control plans and best management practices for construction, and likely not be of significant disturbance to floodplains.

Preferred Alternative

This alternative would impact the floodplain associated with several streams. Construction activities would occur within the floodplains. All floodways would only be temporarily impacted during construction of trail bridges and culverts. Construction of the trail would involve cutting and filling to minimize the slope of the trail. The location of the fills within the Study Area would be examined during final design to assess any floodplain impacts. Many riverine systems are deeply incised and therefore their flood flows are contained within their channels. Potential effects associated with the installation of bridge piers and piles would also be addressed during final design through the use of erosion and sediment control plans and best management practices for construction, and likely not be of significant disturbance to floodplains.

Conclusion

The No-Build Alternative would not impair Parkway floodplains or floodways. Although construction activities associated with the Parkway Shoulder and Preferred Alternatives would result in minor impacts to the Study Area's floodplains and floodways, final design would seek to minimize impacts, and there would be no impairment to Parkway resources.

Geology and Topography

No-Build Alternative

No earth moving would occur with the No-Build Alternative, and therefore there would be no impact on geology and topography.

Parkway Shoulder Alternative

Any construction activities that would occur as a result of the Natchez Trace Parkway motor road construction completion would also include impacts for construction of this This would involve clearing of the natural and non-urbanized landscape for alternative. inclusion of the trail with the two-lane Parkway in the southern section not yet constructed. Final design of the alignment would dictate the required amount of cut and or fill for construction of the Parkway with the adjoining multi-use trail. The depth of excavation would be minimal, i.e., a 4" aggregate base plus 2" asphalt pavement. The majority of this will be removal of topsoil. Construction of this alternative would require activities on loess soils. These soils tend to have good physical characteristics, which include: extremely fine particles; irregularly shaped particles; potential for massive structure and vertical clefts; ability to absorb water; lack of coherence; and, the capacity to remain in vertical walls and resist weathering. In areas where water does not actually move over the surface, very steep slopes are retained, and direct runoff is deterred largely by percolation (Draft EIS Natchez Trace Parkway, 1998). This may help in reducing disturbance in areas where there are bridges spanning large riverine systems with steep and high banks.

Preferred Alternative

The Preferred Alternative would also require ground disturbance. The trail's alignment has been located so as to minimize cut and fill throughout the Study Area, while maintaining ADA accessibility to the maximum extent possible. The actual limits of cut and fill

would be determined during final design. It is estimated that approximately 50 acres of land disturbance would occur, with approximately 330,000 cubic yards of excavation and approximately 395,000 cubic yards of fill required for grading. This alternative would also be constructed in loess soils, which may help in reducing disturbance in areas where there are bridges spanning large riverine systems with steep and high banks.

Conclusion

The No-Build Alternative would not impair Parkway geologic or topographic resources or values. The Parkway Shoulder Alternative is anticipated to only cause impacts already required by Parkway motor road construction. The Preferred Alternative would also require areas of ground disturbance, however, disturbance would be minimized. Although ground disturbance is anticipated, no impairment to the geology and topography of National Park Service lands would occur for either of the build alternatives.

Soils

No-Build Alternative

The No-Build Alternative would have no impact on soils within the Study Area.

Parkway Shoulder Alternative

Construction of the Parkway Shoulder Alternative would cause soil erosion by clearing the Project Area of vegetation and exposing the highly erodible soils to erosive water and wind action. This negative impact would be minimized through the use of sediment and erosion control measures. All disturbed areas would be stabilized with vegetation. Long-term but negligible effects on Project Area soils would include excavation, the mixing of soil horizons, and the addition of aggregate fill and road surface pavement over existing soils. Slopes from the roadway and bike lanes would be re-vegetated with native grasses and wildflowers. An

erosion and sediment control plan would be prepared and included in the final construction plans. Implementation measures would include: a) performing drainage and slope work to prevent erosion, and b) installing such features as silt fences, straw bale dikes, and inlet protection.

Preferred Alternative

Impacts to soils as a result of the Preferred Alternative would be both temporary and permanent. Soil excavation and fill areas, as well as the use of heavy construction equipment would cause disruption to soils. Construction of this alternative would cause soil erosion by clearing the land of vegetation and exposing the highly erodible soils to erosive water and wind action. This impact would be minimized by re-vegetating with native grasses and wildflowers. An erosion and sediment control plan would be prepared and included in the final construction plans. Implementation measures would include: a) performing drainage and slope work to prevent erosion, and b) installing such features as silt fences, straw bale dikes, and inlet protection.

Conclusion

The No-Build Alternative would not impair Parkway soil resources. The Parkway Shoulder and Preferred Alternatives would have minor impacts to soils within the Study Area through exposure to erosion, however, these impacts would be minimized as described above. Although impacts are expected with the construction of either build alternative, neither alternative would impair the soils within the Park Service lands. Final design plans for the alternatives would more precisely quantify the amount of soil directly impacted for construction.

Noise

No-Build Alternative

There would be no noise impacts within the Project Area for the No-Build

Alternative.

Parkway Shoulder Alternative

There would be temporary and minor noise impacts during construction of the

bicycle lanes along the Parkway. No long-term noise impacts should occur along the Parkway as

a result of this alternative. The Parkway is already designated as an official bike route.

Therefore, the area is already occupied by those users. There would only be a negligible increase

in noise levels at the southernmost end of the trail with the proposed parking areas, which are

surrounded by adjacent recreational uses and commercial and industrial establishments. Any

noise generated by the trail would be similar to the level of noise already produced by existing

playgrounds and recreational fields.

Preferred Alternative

There would be temporary and minor noise impacts during construction of the

multi-use trail. The trail would not be adjacent to the Parkway for its entire length. Much of the

length of the trail would be located within the surrounding forests. Vegetation and topography

would aid in buffering any Parkway noises from users on the trail. The Parkway for some of the

Study Area is up-slope from where the trail would be placed, also helping buffer sounds both

from the Parkway and the trail. The minimal amount of noise generated from pedestrian use of

the trail would not impact any residences adjacent to the NPS boundary. This alternative would

have a negligible increase in noise levels at the southernmost end of the trail with the proposed

parking areas, which are surrounded by adjacent recreational uses and commercial and industrial

establishments. Any noise generated by the trail users would be similar to the level of noise

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences

September 2002

already produced by existing playgrounds, recreational fields, and businesses surrounding the site.

Conclusion

The No-Build Alternative would not impair Parkway noise resources or values.

During construction of both the build alternatives, temporary construction noises would occur.

Although the Parkway Shoulder and Preferred Alternatives would introduce short-term

construction noises and very negligible long-term noise at parking areas, they would not impair

Parkway noise receptors or values.

SOCIO-ECONOMIC ENVIRONMENT

Social Environment

Population and Housing

The primary purposes for designing and constructing a multi-use trail is to help

meet the increased demand for recreational trail systems and to separate trail users from

vehicular traffic, thereby reducing the conflicts between the two in the greater Natchez

metropolitan area. The National Park Service has set a goal of placing the multi-use trail

alongside the Parkway, and set back 100 feet off the fill line of the Parkway construction and 50

feet from the National Park Service right-of-way line. The purpose of the 50-foot setback is to

minimize impacts to adjacent populations and housing.

No-Build Alternative

The No-Build Alternative would not have any impact on the population and

housing within Natchez and the surrounding area.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Parkway Shoulder Alternative

The Project Area falls within National Park Service property, which contains no

private residences or businesses, therefore, the Parkway Shoulder Alternative would not require

any residential or business displacements. In addition, the parking lots provided at the two ends

of the project limits would also not impact any neighboring populations. Parking areas would

need to be accessed from the Parkway motor road in all areas except for the southern-most

section of the trail. In this area, the surrounding uses already consist of existing playgrounds,

recreational fields, and businesses, and the addition of the parking area would not create any

negative impacts.

Preferred Alternative

The Project Area falls within National Park Service property, which contains no

private residences or businesses. Therefore, the Preferred Alternative would not require any

residential or business displacements. The 50-foot setback from the right-of-way line would also

minimize visual and noise impacts to adjacent land uses. In addition, the parking lots provided

would not impact any neighboring populations, the same as for the Parkway Shoulder

Alternative.

Conclusion

There are no defined neighborhoods within the Project Study Area, and therefore

the build alternatives would not disrupt the integrity of any neighborhoods, nor would they cause

changes in patterns of social interaction. The alternatives would create a safer environment for

trail users and vehicular traffic.

The No-Build Alternative, Parkway Shoulder Alternative, and the Preferred

Alternative all would not impact any population or housing within the Project Study Area.

Therefore, no impairment to the area's population and housing would occur.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Environmental Justice

No-Build Alternative

The No-Build Alternative would have no impact on low-income, minority,

elderly, or handicapped populations.

Parkway Shoulder Alternative

The Project Area is composed entirely of National Park Service property, which

contains no private residences. Therefore, no low-income, minority, elderly, or handicapped

populations would be disproportionately affected by this alternative considered for the project.

Preferred Alternative

The Project Area is composed entirely of National Park Service property, which

contains no private residences. Therefore, no low-income, minority, elderly, or handicapped

populations would be disproportionately affected by the Preferred Alternative being considered

for the project.

Conclusion

Neither the No-Build Alternative nor the build alternatives would have any

impact on environmental justice issues, and therefore, environmental justice would not be

impaired.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Economic Environment

Employment and Economics

No-Build Alternative

The No-Build Alternative would not have any impact on employment and economics within the Study Area, nor would there be any benefit for construction workers.

Parkway Shoulder Alternative

The proposed Parkway Shoulder Alternative would not appreciably influence employment statistics or the economic activity in the area. The bicycle lanes adjoining the Parkway would not require significantly more maintenance or security than the Parkway currently requires. Local construction jobs arising from trail construction would be substantial but temporary in nature. The Natchez Trace Parkway already attracts bicyclists to the area due to its designation as a National Bike Route. The addition of these lanes would simply provide a more comfortable travel "zone" for which bicyclists may safely ride.

Preferred Alternative

Creating a multi-use trail within the National Park Service boundaries, but generally not along the Parkway motor road, would require additional maintenance and security for the area, requiring a greater budget for these services. A larger crew than that required for the Parkway Shoulder Alternative would be needed to maintain the trail in good condition, especially after large storms. The trail would be constructed so as to accommodate maintenance and emergency vehicles. There would also be a need to increase NPS patrols for the area from sunrise to sunset while the trail is open for public use.

Conclusion

The No-Build and Parkway Shoulder Alternatives would not have any appreciable

impact on employment statistics or the economic activity in the area. The Preferred Alternative

would have a positive impact, requiring some additional personnel for maintenance and security

of the trail. No impairment to the employment or economics of the area would occur as a result

of any alternative.

The Visitor Industry in Natchez

No-Build Alternative

The No-Build Alternative would not promote more visitor use in the Natchez

area, nor would it detract from existing visitor use.

Parkway Shoulder Alternative

Since the Natchez Trace Parkway already attracts bicyclists to the area due to its

status as a National Bike Route, the addition of designated bike lanes would mainly provide a

more comfortable travel "zone" where bicyclists may safely ride. This may promote more use of

the Parkway for local bicycle users, however it would not attract any more visitors to the

Parkway than currently exist, as these improvements would only apply to the 8-mile stretch of

Parkway.

Preferred Alternative

This alternative would separate vehicular traffic and trail users, and complete a

small part of the Natchez Trace Parkway recreational trail system. The multi-use trail would

provide another attraction to the Natchez area. Many people currently visit the historic sites in

Natchez and along the Natchez Trace Parkway. Construction of the Preferred Alternative would

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

enable people to enjoy the natural landscape of the area while using the trail for recreation. The proposed parking lot and interpretive exhibits at the Elizabeth Female Academy, a National Register-listed historic site, would also inform visitors about the history of the area. This enhanced visitor experience of the Parkway and trail may increase the number of visitors to the Natchez vicinity, benefiting the regional visitor industry and its associated businesses. Cyclists, pedestrians, wheelchair users, and others would all benefit from use of this trail, although serious cyclists would likely continue to use the motor road. It is unlikely that the trail's presence would actually promote individuals to move into the area.

Conclusion

The No-Build Alternative would not increase visitor use, while the Parkway Shoulder Alternative would likely increase local resident use of the trail and Parkway. The Preferred Alternative would potentially increase the number of visitors in the Natchez vicinity. No impairment of Parkway visitor industry would occur under any of the alternatives.

Land Use

No-Build Alternative

There would be no impact to existing land uses for the No-Build Alternative.

Parkway Shoulder Alternative

Existing land uses for the Parkway Shoulder Alternative consist of mostly forested area and open space, with some commercial, industrial, and residential areas in the vicinity surrounding the southern portion of the Project Area. These land uses would not change as a result of trail construction. The lower three miles of Parkway has not yet been constructed. When constructed, the existing land use, mostly undeveloped forest, would be converted to Parkway and bicycle lanes and mowed grassland, just as the northern section.

Preferred Alternative

The Preferred Alternative, generally separated from the Parkway motor road,

consists of the same land uses described above. Although the multi-use trail may be located

nearer to residential establishments with this alternative, those land uses would not be impacted.

The area would remain as open space or forest, and the trail would cross through those areas. It

is the goal of the National Park Service to keep the trail within a minimum of 50 feet of the Park

Service boundary, therefore there would be at least 50 feet of buffer between the trail and any

residence.

Conclusion

No impairment to land use would result from either the No-Build Alternative or

the build alternatives. Impacts under the Parkway Shoulder Alternative would principally be a

result of Parkway construction. Except for the presence of the trail, under the Preferred

Alternative, there would be no impact to land use other than conversion of forest to paved trail.

CULTURAL RESOURCES

Effects on Parks and Recreation Facilities

No-Build Alternative

With the addition of any future recreation centers at the southern end of the

Project Area, the No-Build Alternative would not allow for any connection from the Parkway to

the center. This alternative would have no effect on the parks and recreational facilities currently

within the project vicinity.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Parkway Shoulder Alternative

The Natchez Trace Parkway is a national park with picnic areas, overlooks,

sections of the old trace and other trails, and interpretive sites of pre-historical, historical, and

natural interest. These facilities would be as readily accessible from the trail as they currently

are from the Parkway only. Access to the Elizabeth Female Academy site and the recreation

area at the southern extent of the Project Area would not exist. Activities would remain as they

currently exist, and this alternative would have no effect on the parks and recreational facilities.

Preferred Alternative

With the addition of the multi-use trail for Section 3X of the Parkway, as well as

its associated parking lots and access to one historic site, the Park may see increased users. The

recreational facilities located toward the southern section of the Project Area may also see

increased use, especially with the proposed parking area near Sergeant Prentiss Drive. This trail

also provides a connection to the additional parking area at the Elizabeth Female Academy. The

Preferred Alternative would provide an additional recreational resource, and therefore would

have a positive effect on parks and recreation facilities in the Natchez area.

Conclusion

The No-Build Alternative and the Parkway Shoulder Alternative would not

impact recreation facilities or have effects on parks. The negligible impact of additional parking

added under the Preferred Alternative may increase use to the recreation facilities and the park

area. None of the alternatives would adversely effect or impair parks or recreation facilities.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Historic Architectural Resources

No-Build Alternative

Due to the absence of historic structures within the Project Study Area for the No-

Build Alternative, it is concluded that there would be no effect on historic architectural

resources.

Parkway Shoulder Alternatives

Due to the absence of historic structures within the Project Study Area for the

Parkway Shoulder Alternative, it is concluded that there would be no effect on historic

architectural resources. In addition, there would be no access to or between the planned

recreation center by Liberty Road or the Elizabeth Female Academy site.

Preferred Alternative

The Elizabeth Female Academy is located within the Project Study Area for the

Preferred Alternative. This National Register-listed site is the location for a proposed parking

area. Interpretive signage could be used to educate visitors about the history of this site, creating

a minor positive effect. The public's physical contact with the structure would be restricted

through fencing, and signs would explain the need to preserve the ruins and the penalties for

damaging them. The surrounding area would remain forested, and additional vegetation would

be used to visually screen the Elizabeth Female Academy from the approximately ten parking

spaces to be located in its vicinity. Should increased public awareness of the site be found to be

a problem, fencing and vegetative screening would again be employed, but without interpretive

signage. In this way, physical access and public knowledge of the site would be minimized.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Conclusion

Neither the No-Build nor the Parkway Shoulder Alternative would have any

impact to historic architectural resources. The Preferred Alternative could have a positive effect

in terms of interpreting the Elizabeth Female Academy for visitor education. Overall, none of

the alternatives would impair historic architectural resources.

Archeological Resources

No-Build Alternative

The No-Build Alternative would have no effect on any archeological resources.

Parkway Shoulder Alternative

The same resources that would be affected by completing the construction of the

Parkway would be affected by this alternative. The archeological sites within the Parkway

Shoulder Alternative's area of potential effects include one possibly National Register-eligible

resource, an archaic site of unknown date. There are three sites whose eligibility has not been

determined: two are unspecified aboriginal sites; and one is a site with unknown artifact content

and periods of occupation. There are two unspecified aboriginal sites potentially impacted under

this alternative that are not recommended as eligible for the National Register. Due to extensive

ground disturbance associated with the previous parkway construction, and completed

archeological studies for the area not yet constructed, the Parkway Shoulder Alternative would

not require additional archeological surveys.

Preferred Alternative

According to SEAC records, the Preferred Alternative, including its parking lots,

will impact five archeological sites that have been evaluated as potentially eligible. Four of these

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

sites have both prehistoric and historic components, while one site is both Natchez and historic. There is one National Register-listed site, the Elizabeth Female Academy. The Preferred Alternative calls for parking to be located at this site, therefore additional archeological investigation and archival research would be conducted to determine the types and locations of other structures documented to have once existed at the Elizabeth Female Academy site. It is anticipated that the Preferred Alternative would have no adverse effect on the site. James Atkinson of SEAC noted in 1992 that the Elizabeth Female Academy's remaining wall was being damaged by vandals due to the site's isolation. The Preferred Alternative would reduce this physical isolation and is anticipated to have no adverse effect on the site, as the Elizabeth Female Academy would be screened with vegetation from the adjacent parking lot and would be protected from vandalism by fencing and no trespassing signs. Additionally, the further investigation of the site will help with the planning of the proposed parking lot, in order to prevent disturbance of any archeological resources associated with the site.

The trail will cross six other sites which have been evaluated as not significant: two prehistoric, three historic, and one both prehistoric and historic. Of the six sites that will be impacted, data recovery has been started at the Natchez site (22Ad892) because it is also threatened by the Parkway. If the other five sites cannot be avoided, then data recovery will be scheduled.

Phase I surveys and other archeological investigation conducted by SEAC have been closely coordinated with the Parkway, the NPS, and the Mississippi Department of Archives and History (MDAH) to ensure comprehensive coverage and an adequate research design to determine whether each site is eligible for the National Register of Historic Places. The inventory and evaluation phases of investigation have been completed. Consultation with these parties will continue throughout the Section 106 process. If necessary, a Memorandum of Agreement (MOA) would be established between the NPS and MDAH regarding measures to be taken to mitigate archeological impacts.

Conclusion

The No-Build Alternative would not impair any archeological resources within

the National Park Service Project Area. The Parkway Shoulder Alternative would impact

archeological sites that are unavoidable by the construction of the Parkway motor road, however,

impacts to these resources would not be an impairment. The Preferred Alternative would also

impact various archeological resources. Resources of more significance would be avoided to the

best extent possible. Once archeological surveys are complete, final analysis of existing

resources can be completed. The build alternatives are also not anticipated to impair the

archeological resources of the area.

VISITOR USE AND EXPERIENCE

Visual Experience and Aesthetics

Visually sensitive receivers for the project are predominantly the motorists using

the Parkway that would view the multi-use trail and activities on the multi-use trail. To a lesser

extent, users of the trail that would view the Parkway and several residents that would view the

trail would also be visually sensitive receivers.

No-Build Alternative

There would be no changes to the visual experience and aesthetics of the Project

Study Area as a result of the No-Build Alternative.

Parkway Shoulder Alternative

The visual experience for the Parkway Shoulder Alternative is essentially the

same as that for the Natchez Trace Parkway. Users of the bike lanes would, however, be

traveling adjacent to the vehicles, but would have a good view of the open area immediately

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

adjacent to the Parkway, the forested area in the background, and the streams, ravines, and roadways crossed by the Parkway. Motorists would also have a somewhat improved visual experience, considering the safer and more relaxed experience of the Parkway. There would also be a reduced potential for conflict with the bicyclists.

Following is an assessment of the visual effects of the Parkway Shoulder Alternative.

Magnitude:

- Paving of the shoulder for this alternative would be totally compatible with the andscape, in that the alternative's footprint would not be appreciably greater than the Parkway itself
- The shoulder lane would likely exist as long as the Parkway exists
- The shoulder alternative would be small in scale
- The paving of the shoulder could be reversed, but it is unlikely that there would be justification for its removal
- The viewing distance from the shoulder alternative would be the same as the viewing distance from the Parkway without the 5-foot paved area.
- The shoulder alternative would not block the view from the Parkway

Sensitivity of receivers include:

- The value and quality of the views from the Parkway would remain unchanged, as would the limited number of views from residential properties. The shoulder alternative, along with the Parkway construction at the southern terminus, would result in a significant change in the views from the open recreation land.
- The receiver population would include all of those motorists that utilize the Parkway in the Project Area, and a few residential properties that border the Parkway right-of-way.
- The duration of the view from the Parkway to bicyclists would be permanent yet infrequent
- The bicyclists would be highly visible from the Parkway

In summary, the magnitude and sensitivity of the views and aesthetics of the change to the Parkway from a signed shared roadway (designated bike route), as it is today, to a parkway with a marked bike lane, would be minimal for this alternative.

Preferred Alternative

In areas in which the Preferred Alternative alignment meets the Parkway and utilizes Parkway bridges, the visual experience would be the same as the Parkway Shoulder Alternative. However, in the remaining areas, the trail would be located within the wooded and open areas. Trail users would be much closer to the environmental surroundings. Forest, riverine wetland systems, and local wildlife may be more easily viewed and appreciated while using the trail then if passing by along the Parkway roadway. The experience would also be improved for motorists, who would better enjoy the Parkway's scenic attractions without maneuvering to avoid cyclists in the roadway. The proposed parking facilities located along the trail would enhance visitor experience. The proposed parking at the Elizabeth Female Academy would also provide an educational and visual experience for those using the trail. Interpretive signs would be installed to provide a history of the Natchez Trace and local ecology.

Following is an assessment of the visual effects of the Preferred alternative.

Magnitude:

- A multi-use trail separate from the Parkway motor road would be highly compatible with the landscape. Once completed, the trail would blend in with the rural landscape. Except where the trail approaches the bridges that would carry it over streams and roads, the trail would not be extremely noticeable from the Parkway. Users of the trail would, however, be visible to varying extents to the motorists. To a large extent the trail would be shielded from the Parkway by existing trees, which would be retained.
- In a few areas the trail would be visible from existing residential properties. However, the
 effect would be minimized by maintaining a 50-foot distance between the trail and the
 property lines.

- Likewise, the trail users' view of the Parkway would be minimized through the retention of
 trees between the trail and the Parkway. During the reduced foliage of winter months, the
 Parkway would be much more visible from the trail.
- The Preferred Alternative multi-use trail would likely exist as long as the Parkway exists
- The Preferred Alternative would be small in scale. The 10-foot wide trail, shoulders, and drainage swales would occupy a relatively small area of the Parkway right-of-way.
- The paving of the trail could be reversed, but it is unlikely that there would be justification for its removal.
- The viewing distance from the Parkway would not be changed by implementation of the Preferred Alternative. The viewing distance from the trail would vary from a short distance within the forest to extensive distances from the bridges and from open field areas.
- The Preferred Alternative would not block the view from the Parkway

Sensitivity of receivers include:

- The value and quality of the views from the Parkway would remain unchanged, as would the limited number of views from residential properties. Like the Parkway Shoulder Alternative, views from the recreation area at the southern terminus would change significantly for the Preferred Alternative.
- The receiver population would include all motorists that utilize the Parkway in the Project Area, and a few residential properties that border the Parkway right-of-way. Motorists would only periodically see the trail from the Parkway.
- The duration of the view from the Parkway to users of the trail would be permanent yet infrequent.
- For the most part, trail users would not be highly visible from the Parkway.

In summary, the visual quality of the landscape for users of the Parkway and users of the Preferred Alternative would not be diminished from its current state. The Preferred Alternative would provide a screened and natural experience for the users, while providing a visual separation between the motor road and the multi-use trail. Only where the trail approaches

the bridges and where the trail crosses the bridges themselves, or on trail bridges immediately adjacent to the Parkway bridges, would the trail be highly visible from the Parkway.

Conclusion

The No-Build Alternative would not impair visitor use and experience. The Parkway Shoulder Alternative would have a minor positive impact, while the Preferred Alternative would have a somewhat greater positive impact on visitor use and experience. No impairment of visitor use and experience would occur under any of the alternatives.

Safety

No-Build Alternative

There would be no additional safety patrol needed for the No-Build Alternative.

NPS activities along the Parkway would remain as they are. However, this means that the hazards of motor vehicles and bicyclists sharing the roadway would continue.

Parkway Shoulder Alternative

There would be no additional patrol needed for the Parkway Shoulder Alternative. NPS activities along the Parkway would remain as they are. However, this means that the hazards of motor vehicles and bicyclists sharing the roadway would continue. Many users such as pedestrians, joggers, dog walkers, persons in wheelchairs, skate boarders, people pushing baby carriages, and others are also likely to use such a trail. Five feet is not sufficient for a bicyclist to pass a mother and a stroller safely without possibly moving onto the adjacent motor road, for example. There would be only a negligible positive impact to the reduction of motor vehicle and bicycle conflict through the addition of dedicated trail area along the motor road. In addition, this alternative may inadvertently promote Natchez Trace Parkway motor road users to pull over to the side and park. This would pose a danger to users of the trail.

Preferred Alternative

With construction of the Preferred Alternative, additional Park Service patrol

would be needed to pass through the trail area on a regular basis from sunrise to sunset. Located

at each parking area would also be a sign reading that the trail is open only from sunrise to

sunset. There would be signage placed along the length of the trail indicating upcoming at-grade

road crossings, warning trail users of possible passing vehicular traffic. Those utilizing the trail

after dark would be doing so at their own risk and not with the recommendation of the National

Park Service. Overall, a positive impact and improved safety is expected through the separation

of motor vehicle and bicycle traffic. The trail would also be built to enable emergency vehicles

access.

Conclusion

The No-Build Alternative would not impact the current safety levels of the

Parkway. The Parkway Shoulder Alternative would have a minor improvement on safety for

bicyclists by providing a separate facility directly adjacent to the motor road. The Preferred

Alternative would have a more positive effect on safety, by separating the motor road from the

trail. None of the alternatives would impair Parkway safety.

SECONDARY AND CUMULATIVE EFFECTS

As required in the Council on Environmental Quality's regulation 40 CFR Part

1508.25(c), all past, present, and reasonably foreseeable future actions must be considered in the

environmental documentation. Secondary impacts are those reasonably foreseeable impacts

occurring after the construction of the project, due to development that is dependent upon the

project's alternatives. Cumulative impacts are those incremental impacts on the environment that

result from the action when added to other past, present, and reasonably foreseeable future

actions regardless of what agency (federal or non-federal) or person undertakes such actions (40

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

CFR 1508.7). Secondary and cumulative impacts may occur shortly after project construction, or may occur over many years.

No-Build Alternative

The No-Build Alternative would have no secondary or cumulative impacts to the

Study Area and it's surroundings.

Parkway Shoulder Alternative

No new growth dependent on the presence of the multi-use trail is expected to

occur, and therefore, there would be no secondary effects on social and natural resources that

would result as a consequence of the project's construction. The multi-use trail would be

constructed within an established right-of-way owned by the National Park Service and would be

a minor addition to the Natchez Trace Parkway development.

In terms of cumulative effects, the multi-use trail, considered along with the

Parkway, would incrementally increase runoff from the impervious surfaces to the many stream

systems in the area. However, swales that would be constructed along the trail would attenuate

the flow of the stormwater, thereby minimizing the potential for stream degradation or

aggradation.

Preferred Alternative

Again, no new growth dependent on the presence of the multi-use trail is expected

to occur, and therefore, there would be no secondary effects on social and natural resources that

would result as a consequence of the project's construction. The multi-use trail would be

constructed within an established right-of-way owned by the National Park Service and would be

a minor addition to the Natchez Trace Parkway development.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 4: Environmental Consequences September 2002

Cumulative effects of the Preferred Alternative may include increased stormwater runoff, but impacts would be negligible and properly mitigated. Other foreseen cumulative effects associated with the presence of the trail facility, none of which should be significant, include increased visitations to the Female Academy archeological site due to construction of a new parking lot adjacent to the property, minor fragmentation of forest caused by clearing for both the Parkway and the trail, and increased human encroachment on wildlife habitat through usage of both the Parkway by motorists and the trail by pedestrians and bicyclists.

Conclusions

The No-Build Alternative would not have any secondary or cumulative effects to the Parkway resources or values and therefore no impairment would result. In addition no cumulative effects by either build alternative would result in impairments to the Parkway resources or values.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL
ENVIRONMENTAL ASSESSMENT

SECTION 5: IDENTIFICATION OF THE PREFERRED

ALTERNATIVE

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria

suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by

Council on Environmental Quality (CEQ) regulations. CEQ regulations provide direction that

the environmentally preferred alternative is the alternative that causes the least damage to the

biological and physical environment, as well as best protects, preserves, and enhances historic,

cultural, and natural resources.

What has previously been referred to, as the Preferred Alternative is the most

environmentally preferred multi-use trail alternative, since it would provide for the separation of

trail users and vehicular traffic while fulfilling the Congressional directive to establish a route for

a multi-use trail along the Natchez Trace Parkway. Although this alternative would impact some

natural and cultural resources, it is believed that through avoidance measures, and the use of best

management practices, any impacts to the environment would be minimized and mitigated.

PREFERRED ALTERNATIVE

The previously referenced Preferred Alternative is the preferred alternative for the

reasons stated above. This alternative best satisfies the purpose and need for the proposed action

without compromising the values and resources associated with the Natchez Trace Parkway. To

the extent practicable, the existing character of the Parkway would be maintained. Impacts to the

environment would be kept to the minimum necessary to accomplish essential elements of the

project.

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 5: Identification of the Preferred Alternative September 2002

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL ENVIRONMENTAL ASSESSMENT SECTION 6: COMMITMENTS AND RESOURCES

COMMITMENTS AND RESOURCES

Irreversible and Irretrievable Commitment of Resources

No permanent loss of significant natural or cultural resources would occur under

the proposed action. The proposed action to construct a new multi-use trail is reversible in that

the trail could be removed and revegetated in the future. Trail signs or markers could be

removed and the area could be restored to current existing conditions.

Unavoidable Adverse Environmental Effects

No significant unavoidable adverse environmental effects are anticipated.

Local Short-Term Uses and Maintenance/Enhancement of Long-Term Productivity

The proposed action would maintain the current functional use of the Parkway as

a transportation corridor. No long-term management possibilities, park resources, or ecosystems

would be impacted by the proposed action. Although short-term maintenance costs may increase

due to the creation of a separate trail, the benefits to motorist and trail user safety and visitor

experience would be immediately enhanced upon completion of the action.

Environmental Commitments

The No-Build and Parkway Shoulder Alternatives do not meet the purpose and

need for this action. Therefore, what has been referred to previously as the Preferred Alternative

has been selected as the preferred alternative because it addresses the safety concerns and

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 6: Commitments and Resources September 2002

Congressional directive. In order to minimize the environmental impacts associated with the Preferred Alternative, the following measures are recommended:

- 1. Minor shifts in the trail alignment during final design to minimize impacts to specimen trees.
- 2. In areas with reported occurrences of Mississippi state-listed species of concern, construction activities would be coordinated so as not to destroy these species or their habitats.
- 3. The final construction plans would include an erosion and sediment control plan; and all systems would be returned to their previous conditions.
- 4. The location of cuts and fills would be examined during final design to assess any floodplain impacts.
- 5. The final construction plans would include directions and specifications to the Contractor for revegetating some of the disturbed areas with non-invasive native plant species.
- 6. Archeological sites would be avoided to the greatest extent possible by minor shifting of the alignment in the final construction plans

Impairment of Park Resources

The NPS has determined that implementation of the Preferred Alternative would not constitute an impairment to the Parkway's resources or values, and would not violate the NPS Organic Act. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies 2001. Although the proposed action does have some minor impacts to the natural and cultural environment, in all cases they are an unavoidable result of actions taken to provide for public safety, enhance visitor experience, and promote Parkway values. Overall, the Preferred Alternative would result in significant benefits to Parkway values and the safety and enjoyment of its visitors, without impairing Parkway resources or values.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL
ENVIRONMENTAL ASSESSMENT
SECTION 7: COMPLIANCE WITH ENVIRONMENTAL LAWS
AND REGULATIONS

COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

The proposed action to construct a multi-use trail within the Natchez Trace Parkway is consistent with the Parkway's management documents.

National Environmental Policy Act (NEPA)

This Environmental Assessment (EA) and subsequent decision documents provide disclosure of the decision-making process and potential environmental consequences of the alternatives. This EA manifests adherence to the values and policy of federal agency environmental responsibility as described in Section 101 of the Act. Pursuant to Section 102(1) of the Act, it is evidence of the National Park Service's actions in accordance with those policies set forth in the Act. This EA will be available for a 30-day public review and comment period after which the NPS will decide if environmental impacts of the proposed action are significant enough to warrant the preparation of an Environmental Impact Statement (EIS). If an EIS is not required, the NPS's Southeast Regional Director may issue a Finding of No Significant Impact (FONSI). Together, this EA and the FONSI would conclude the NEPA compliance for his project.

Endangered Species Act of 1973

Section 7 of the Endangered Species Act directs all Federal agencies to use their authority in furtherance of the purposes of the Act by carrying out programs for the conservation of rare, threatened, and endangered species. Federal agencies are required to consult with the U.S. Fish and Wildlife Service (FWS) to ensure that any action authorized, funded, and/or

Natchez Trace Parkway Multi-Use Trail Environmental Assessment Section 7: Compliance with Environmental Laws and Regulations September 2002

carried out by the agency does not jeopardize the continued existence of any listed species or

critical habitat.

Informal consultation pursuant to the Endangered Species Act was initiated in

April 2001, when a letter was sent to the U.S. Fish and Wildlife Service inquiring whether any

Federal or state listed or candidate threatened or endangered plant or animal species or any other

special status plant or animal species occur in the project area. The FWS responded on April 23,

2001 (See Appendix A) that "no federally listed candidate, threatened, or endangered species or

their habitat are found within the proposed work area...the Service will review the EA when it

becomes available."

Clean Water Act of 1972

This Act seeks to restore and maintain the chemical, physical, and biological

integrity of the nation's water by a variety of means. Section 404 of the Act directs wetlands

protection by authorizing the Army Corps of Engineers to prohibit or regulate, through a permit

process, discharge of dredged or fill material into the waters of the United States, including

wetlands. Actions described in this document comply with the requirements of Section 404 of

the Clean Water Act and all other applicable federal, state, and local agencies.

Water quality in the project area would be protected by the implementation of

erosion and sediment controls, such as silt fencing, straw bale dikes, and inlet protection, as

needed. FHWA staff would prepare the Erosion and Sediment Control Plan for inclusion in the

construction plans.

National Historic Preservation Act of 1966

This Act requires Federal agencies to establish programs for evaluating and

nominating properties to the National Register of Historic Places, and to consider the effects of

an undertaking on listed or eligible properties. Section 106 of the Act mandates that Federal

Natchez Trace Parkway Multi-Use Trail Environmental Assessment

Section 7: Compliance with Environmental Laws and Regulations

September 2002

agencies take into account the effects of their actions on properties listed or eligible for the National Register.

Informal consultation with the Mississippi SHPO was initiated in preparation of a Cultural Resources Assessment in 2001. Additional coordination with the SHPO would be required with continued progress on the project. All proposed construction would be completed in accordance with the Secretary of the Interior's Standards for Historic Preservation.

All ground disturbing activities associated with the project would be reviewed for potential archeological impacts. Completion of compliance with Section 106 of the National Historic Preservation Act would be carried out in accordance with the NPS's Cultural Resources Management Guidelines (RM-28), and appropriate documentation and consultations undertaken.

Based on preliminary archeology survey information, adverse effects to cultural resources are anticipated to occur with the implementation of the Preferred Alternative; however, measures would be taken to ensure that adequate protection and consideration of cultural resources are carried out throughout the design and construction phases of the project as needed. Archeological investigations for this project are ongoing, and any mitigation required for the project would be coordinated with the SHPO.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

This Executive Order requires Federal agencies to promote "nondiscrimination in Federal programs substantially affecting human health and the environment." In response to this direction, Federal agencies must implement actions to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. The proposed action would be located within the boundaries of the Natchez Trace Parkway and would not cause the displacement of any residents, nor would it eliminate jobs, low wage or otherwise. The proposed action would not

affect low-income and minority populations. The project therefore is in compliance with this Executive Order.

Compliance with State and Local Government Regulations

The proposed project is located in the vicinity of Natchez, Mississippi. Applicable State and local governmental regulations and laws would be considered in the planning, design, and construction of the project.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL ENVIRONMENTAL ASSESSMENT SECTION 8: INTERRELATIONSHIP WITH OTHER PLANS

INTERRELATIONSHIP WITH OTHER PLANS

The Natchez Trace Parkway 1987 General Management Plan serves as a manager's guide for meeting the objectives established for the park and as a public statement to NPS management intentions. The plan establishes strategies for resource management, visitor use and development of an integrated park system. The proposed action is compliant with the Parkway's stated purpose.

Recreational use is one of the Parkway's primary operations. Construction of the Preferred Alternative would provide Parkway "visitors and adjacent populations the opportunity to understand and appreciate the historical and natural heritage of the Natchez Trace" while providing "a continuous serene and recreational travel setting," as emphasized in the *General Management Plan*.

The National Park Service Organic Act of August 25, 1916

This Act states that the fundamental purpose of national parks is "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The Preferred Alternative is supportive of this Act because it is the least intrusive to the biological and physical environment, as well as best protecting, preserving, and enhancing historic, cultural, and natural resources. It would provide for the separation of trail users and vehicular traffic while fulfilling the Congressional directive to establish a route for a multi-use trail along the Natchez Trace Parkway. Park resources would not be impaired under this alternative.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL ENVIRONMENTAL ASSESSMENT SECTION 9: INVOLVEMENT AND COORDINATION

INVOLVEMENT AND COORDINATION

In accordance with Section 5-5 of the NPS-12 National Environmental Policy Act Guidelines, coordination and public involvement in the planning and preliminary design of the proposed action was initiated early in the process and has continued to the present.

In May of 2001 a public information meeting was held in Mississippi to discuss the proposed project. The meeting was held for scoping purposes and to generate public interest and comments. Potential impacts of the proposed multi-use trail, as well as possible temporary impacts due to construction activities were evaluated. Site area maps and general information regarding the proposed project were available for viewing and discussion. Representatives of the NPS and FHWA were available to discuss the proposed trail and to answer questions.

The meeting provided an opportunity for interested citizens and interest groups to solicit information and to provide comments on the proposed multi-use trail. Copies of the meeting announcement and handouts can be found in **Appendix B**.

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL ENVIRONMENTAL ASSESSMENT SECTION 10: LIST OF PREPARERS AND REVIEWERS

The following individuals contributed to the development of this document:

Federal Highway Administration

Brigitte Azran, Environmental Compliance Engineer

Ken Atkins, Project Manager

Mark Clabaugh, Bridge Engineer

Natchez Trace Parkway

Stennis Young

Toby Jackson

Craig Stubblefield, Chief, Resource Management

Marcel Crudele

Bill Whitworth, Natural Resource Management Specialist

Chris Miller, Cultural Resource Management Specialist

National Park Service Denver Service Center

Robert Felker

Karen Vaage

URS Group, Incorporated

Joanna Benzing, Environmental Specialist

Ted Hogan, Senior Environmental Group Leader

Megan McDonald, Architectural Historian

Tom Bodor, Senior Archeologist

The following agencies were consulted during preparation of this document:

Federal Highway Administration

National Park Service

U.S. Army Corps of Engineers, Vicksburg District

U.S. Fish and Wildlife Service

Mississippi Department of Wildlife, Fisheries and Parks

Mississippi Department of Archives and History

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL ENVIRONMENTAL ASSESSMENT SECTION 11: REFERENCES

- American Association of State Highway and Transportation Officials. 1999. *Guide for the Development of Bicycle Facilities*, Washington, D.C.
- Atkinson, James R. 1992. Archeological Investigations on the 3X Section of the Natchez Trace Parkway in Mississippi, Including Those at the St. Catherine Creek and Perkins Creek Sites. Southeast Archaeological Center: Tallahassee, Florida.
- Brown, Ian W. 1973. Settlement Patterns in the Bluffs Area of the Lower Mississippi Valley. Unpublished Honors thesis, Department of Anthropology, Harvard University.
- Brown, Ian W. 1978. *The Location of the Historic Natchez Villages*. Paper presented at the 7th French Regime Symposium. Natchez, Mississippi.
- Brown, Ian W. 1985. *Natchez Indian Archaeology: Culture Change and Stability in the Lower Mississippi Valley*. Mississippi Department of Archives and History Archaeological Report No. 15. Jackson, Mississippi.
- Brown, Ian and Jeffery P. Brain. 1984. Archaeology of the Natchez Bluffs Region, Mississippi:

 Hypothesized Cultural and Environmental Factors Influencing Local Population

 Movements. Southeast Archaeological Conference Bulletin 20:38-49.
- Ehrenhard, John E. 1976. Archaeological Reconnaissance of Section 3X of the Natchez Trace

 Parkway, Adams County, Mississippi. On file at the Southeast Archaeological Center:

 Tallahassee, Florida.
- Executive Order 11988. *Federal Register (FR)* 42:101, May 23, 1977.

- FHWA. September 2001. *Natchez Trace Parkway Multi-Use Trail Section 3X Wetland Delineation Report*.
- FHWA. October 2001. Natchez Trace Parkway Multi-Use Trail Section 3X Draft Cultural Resource Assessment.
- FHWA. November 2001. Draft Candidate Alternatives Report, Natchez Trace
 Parkway Multi-Use Trail Section 3X.
- Halchin, Jill. 2000. "Trip Report on Phase I Archaeological Survey for the 3X Terminus, Natchez Trace Parkway, May 22 – June 14, 2000." SEAC Accession Number 1409.
- Mason, Gary R. August 1997. Resource Management Special Report 97-4, National Park

 Service Natchez Trace Parkway, Wetland Resource Identification and Delineation

 Supplemental Descriptions of Selected Wetlands, Section 3X Southern Terminus

 Environmental Impact Statement, Adams County, Mississippi.
- Mason, Gary R. 1996. Final Report, Natchez Trace Parkway Southern Terminus, Terrestrial Plant Baseline Survey, Selected Species. Submitted by Sam W. Rosso, PhD, University of Southern Mississippi, and Donald Reed, PhD, Louisiana Sate University.

Mississippi Department of Environmental Quality, 1998-2000 data.

Natchez Trace Parkway. No date. General Management Plan.

Neitzel, Robert S. 1965. Archaeology of the Fatherland Site: The Grand Village of the Natchez. American Museum of Natural History Anthropological Papers, No. 51.

- Sturdevant, Jay T. "Trip Report and Preliminary Recommendations Following Phase I/II of the Natchez Trace Parkway 3X Multi-Use Trails Survey, February 11-March 8, 2002." SEAC Accession Number 1763.
- U.S. Census Bureau. 2000 internet data.
- U.S. Department of Agriculture. 1970. *Soil Survey of Adams County, Mississippi, Sheets 16, 17, 20, 21.* Soil conservation Service, Washington, D.C.
- U.S. Department of the Interior. 1974. *National Wetlands Inventory Map, Natchez, Mississippi*. Fish and Wildlife Service, Washington, D.C.
- U.S. Department of the Interior National Park Service. 1987. *Natchez Trace: Comprehensive Trail Plan*.
- U.S. Department of the Interior National Park Service. May 1998. *The Natchez Trace*Parkway, Draft Environmental Impact Statement Section 3X, Southern Terminus.
- U.S. Department of the Interior National Park Service. October 1998. *The Natchez Trace Parkway, Final Environmental Impact Statement Section 3X, Southern Terminus*.
- U.S. Department of the Interior National Park Service Denver Service Center.

 September 1995 *Multi-Use Trail Study Environmental Assessment*.
- U.S. Environmental Protection Agency. 1994. National Ambient Air Quality Standards.
- Wetland & Environmental Services, Inc. November 2000. *Draft Natchez Trace Parkway:* Wetlands & Waters of the U.S. Delineation.

Appendix A Agency Correspondence



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Mississippi Field Office 6578 Dogwood View Parkway, Suite A Jackson, Mississippi 39213 April 23, 2001

Mr. Theodore J. Hogan Environmental Manager URS Corporation 4 North Park Drive, Suite 300 Hunt Valley, Maryland 21030

Dear Mr. Hogan:

The U.S. Fish and Wildlife Service (Service) received your letter dated April 12, 2001, requesting information on threatened or endangered species that may be affected by the proposed construction of an eight-mile multi-use trail along the Natchez Trace Parkway in Adams and Jefferson Counties, Mississippi. The study area includes the area one half mile north of the interchange of the parkway and Route 61 and south to Liberty Road. The route runs almost parallel to Route 61. We have the following comments in accordance with the Endangered Species Act (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.).

Our records indicate no federally listed candidate, threatened, or endangered species or their habitat are found within the proposed work area. We anticipate no significant adverse impacts to fish and wildlife species, or Service lands to result from the proposed activity. We understand that your company is in the process of preparing an Environmental Assessment (EA) for the eight-mile multi-use trail. The Service will review the EA when it becomes available, and will make additional comments at that time.

If you have any questions, please contact Daniel Gregg, telephone: (601) 321-1136.

Kathy W. Lunceford

Mississippi Environmental Coordinator



Mississippi

DEPARTMENT OF WILDLIFE, FISHERIES AND PARKS

May 14, 2001

SAM POLLES, Ph.D.

Executive Director Mr. Theodore J. Hogan, Environmental Manager **URS** Corporation 4 North Park Drive, Suite 300

Hunt Valley, MD 21030

Proposed Construction of an Eight-Mile Multi-Use Trail RE: Natchez Trace Parkway, Adams and Jefferson Counties

URS File No. D1F0001122.01

Dear Mr. Hogan:

In response to your request for information dated April 16, 2001, I have searched our database for occurrences of state or federally listed or proposed endangered, threatened, rare or otherwise significant animals and plants on the site referenced above. There are no wilderness areas or wildlife preserves currently known to be affected at this site.

However, located on the enclosed Natchez/Washington quad map within 1 mile of the proposed project area are four reported occurrences of species of special concern. These species were reported per your request in 1997 by Brian Pancher, and having retained the same state status we ask that construction activities within these areas not destroy these species and/or their habitats.

Mississippi Natural Heritage Program has compiled a database that is the most complete, single source of information about Mississippi's rare, threatened, endangered or otherwise significant animals, plants, plant communities and natural features. The quantity and quality of data collected by the MNHP are dependent upon the research and observations of many individuals and organizations. In many cases, this information is not the result of comprehensive or site-specific field surveys; most natural areas in Mississippi have not been thoroughly surveyed, and new occurrences of plant and animal species are often discovered. Heritage reports summarize existing information known to the MNHP at the time of the request and cannot always be considered a definitive statement regarding the presence, absence or condition of biological elements at a particular site. Please feel free to contact us if we can provide any additional information.

Sincerely.

Cynthia Rickis-Gordon/Environmental Biologist

Mississippi Natural Heritage Program



May 11, 2001

SRANK	යි	S3S4 . G5 Y	S3 G3 ≺	S4 G5 N
SPROT				
USESA				
		CEYS HEMPVINE	FETID TRILLIUM	STALKED ADDERS-TONGUE
SCOMNAME	OUACHITA	FLORIDA K	FETID TRI	STALKED

4

Appendix B

Public Meeting Information

Natchez Trace Parkway Multi-Use Trail

Public Information Meeting

May 15, 2001 6:00 P.M.

Alcorn University – Natchez Campus 15 Campus Drive Natchez, Mississippi 39120

> U.S. Department of the Interior National Park Service Natchez Trace Parkway Tupelo, Mississippi

> > In cooperation with the

U.S. Department of Transportation Federal Highway Administration Eastern Federal Lands Highway Division Sterling, Virginia

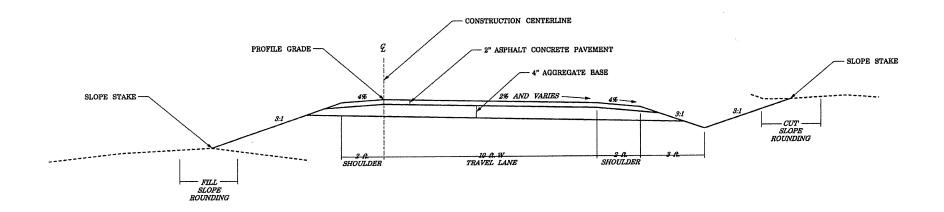
Natchez Trace Parkway Multi-Use Trail Natchez, Mississippi

In the greater Natchez metropolitan area, the climate is conducive to outdoor activity every month of the year and a gentle topography attracts trail users of all interests and abilities. Since the completion of the National Park Service Comprehensive Trail Plan, recreation pursuits such as cycling, jogging, and walking have become even more popular forms of sport and exercise along the Natchez Trace Parkway. With an increased demand for recreational trail systems there is a high potential to create conflicts between different types of trail uses and users and vehicular traffic, if accommodations are not made in the trail design as recommended by the Park's Comprehensive Trail Plan. Over the past several years the Natchez Trace Parkway has received national attention in major cycling and travel magazines, extolling the virtues of cycling the parkway. The states of Mississippi and Tennessee designate the Natchez Trace Parkway as a bike route on their state maps, and several organized rides traversing the length of the parkway occur annually.

The National Park Service (NPS) is proposing a multi-use trail to parallel the Natchez Trace Parkway in the Natchez area. A similar trail recently completed along the Parkway in Jackson has been well received and is already being heavily utilized by the public. When completed, the Natchez Trace Parkway extends from Nashville, Tennessee south to Natchez, Mississippi. The Parkway is only open to the public from the interchange with Route 61 and north. From Route 61 south to the overpass at the new Route 84/98, the Parkway has been constructed, but is not yet open to the public. South of this point the Parkway has not been built. The project area for the multi-use trail includes the area one half-mile north of the interchange at Route 61 and south to Liberty Road in the city of Natchez. The project length equals approximately 8.6 miles. The project area falls within National Park Service property and averages approximately 800 feet in width, straddling the existing Parkway or the marked centerline for the Parkway. The area widens and narrows at irregular intervals providing land for Parkway interchanges and future interpretive and recreational developments.

The purpose of the Multi-Use Trail Study is to develop and evaluate alternatives for the location and design of the multi-use trail on the parklands of the Natchez Trace Parkway in the vicinity of Natchez, Mississippi. Public and agency input is an essential step in developing this set of reasonable alternatives from which one will be selected for implementation. It is anticipated at this time that some of the existing and proposed bridge structures will be utilized to carry the trail over roads and waterways. Once constructed, the multi-use trail would become a part of the Natchez Trace National Scenic Trail. Prior to any ground-breaking activities taking place, an Environmental Assessment will be prepared for public and agency review in accordance with the National Environmental Policy Act.

GO BACK TO PAGE



NATCHEZ TRACE PARKWAY MULTI-USE TRAIL - SECTION 3X

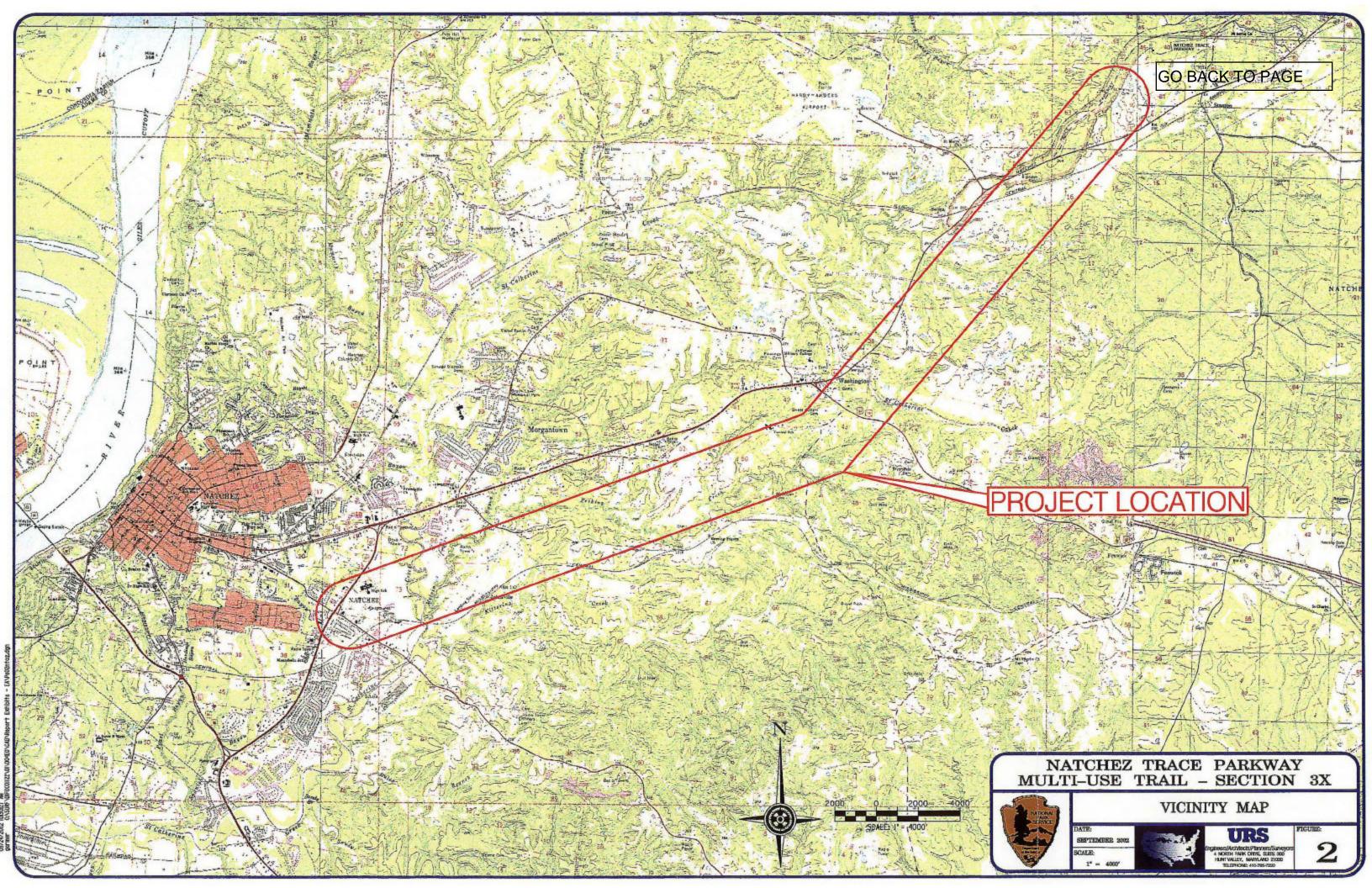


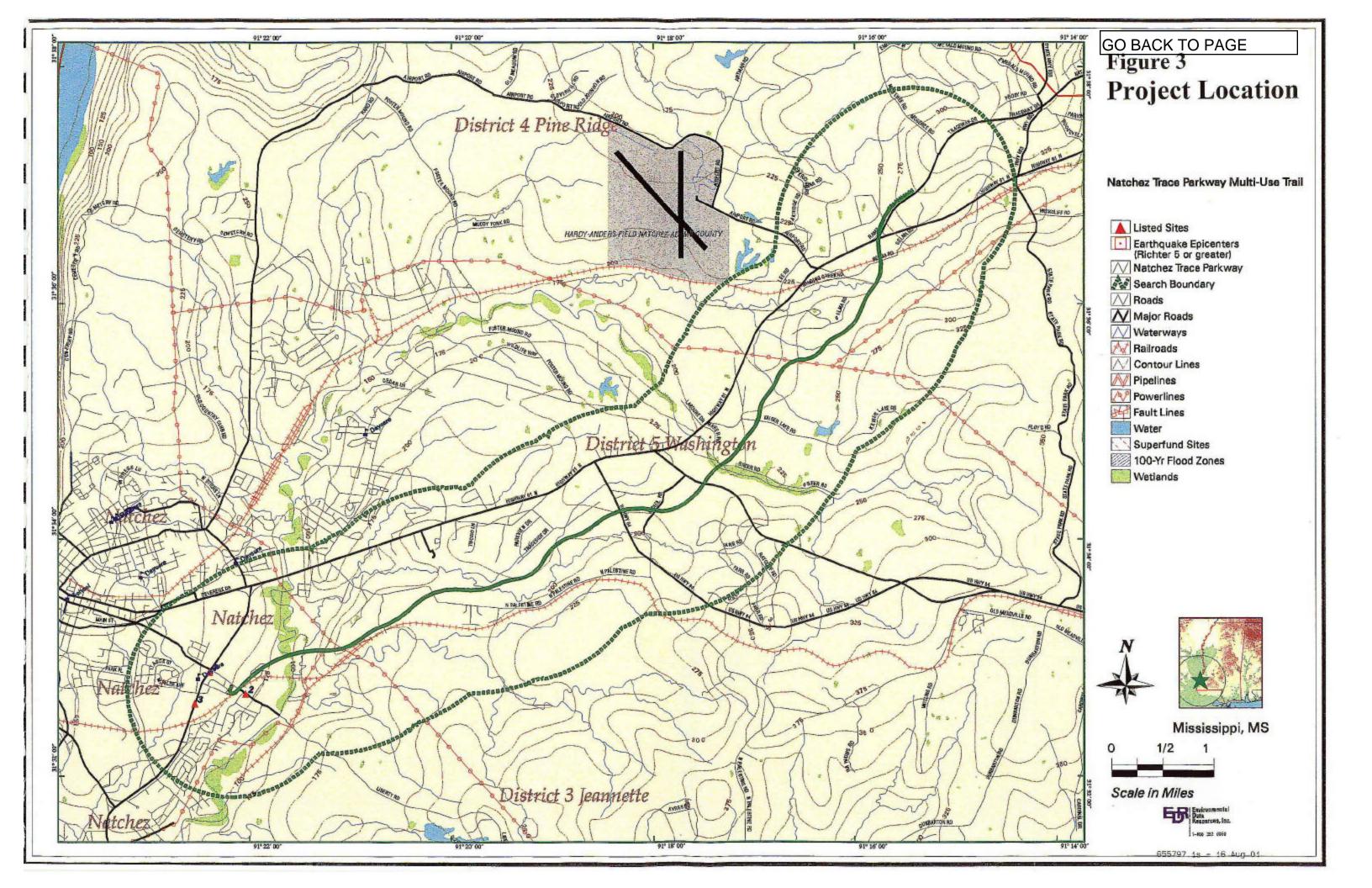
MULTI-USE TRAIL
TYPICAL SECTION

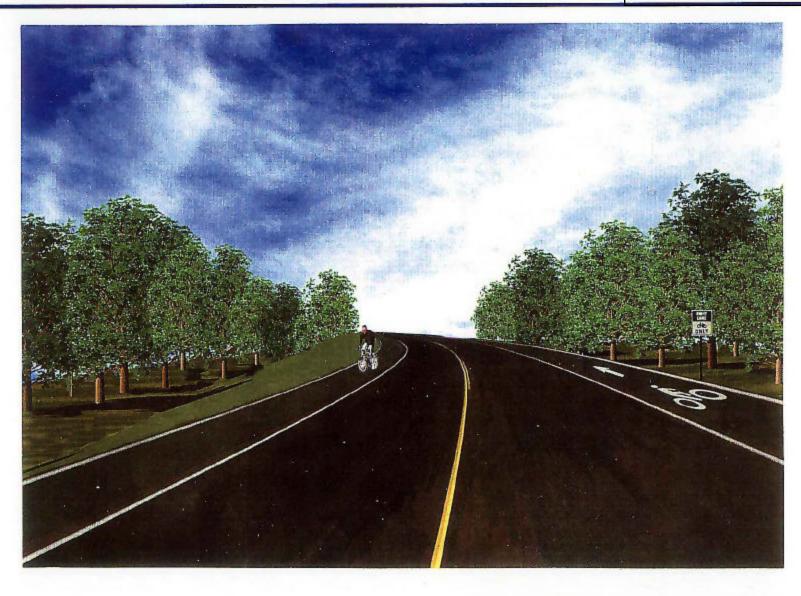
SEPTEMBER 2002
SCALE:
NONE

Engineers/Architects/Planners/Surveyors
4 NORTH PARK PRIVE, SUITE 300
HANTVALLEY, MARTUAND 21000
TELEPPONE 4107-67-7220

figure:







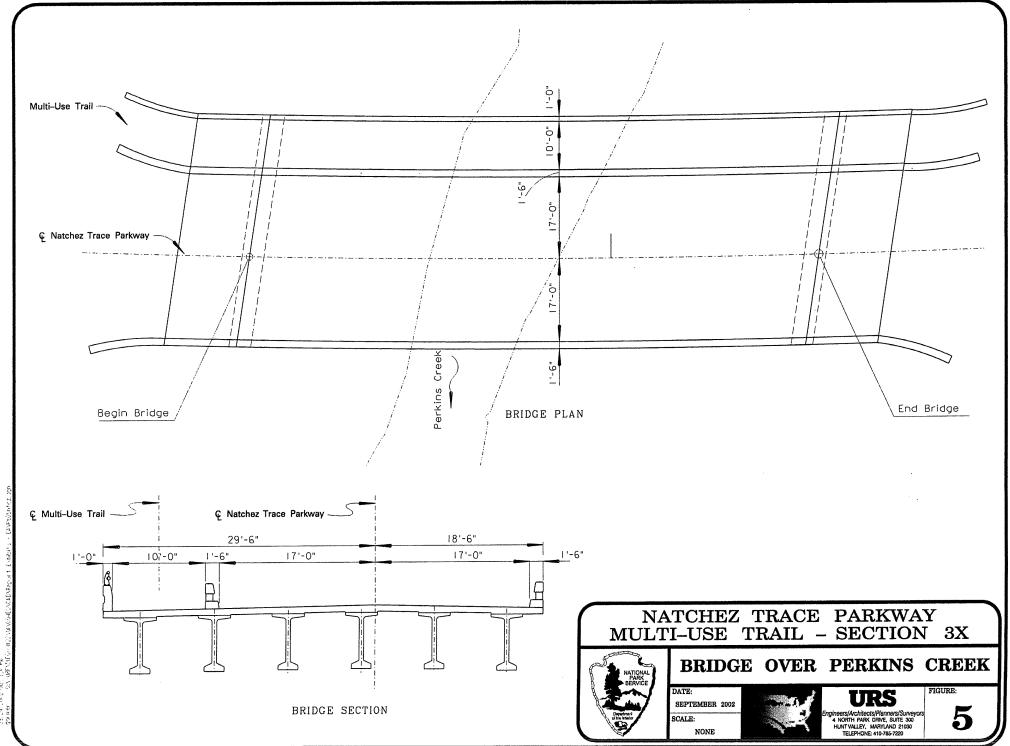


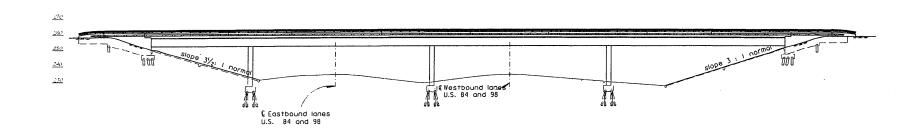


DESIGN VISUALIZATION: PARKWAY SHOULDER ALTERNATIVE

BEPTEMBER 9009

Bi NONE Engineers/Architects/Venners/Surveyor 4 Northe Park Devis, Busta sec HENTYMELEY, MARTIAND EXCED TELEPHONE 410/16/1200 FIGURE





NATCHEZ TRACE PARKWAY MULTI-USE TRAIL - SECTION 3X



MULTI-USE TRAIL BRIDGE OVER U.S. 84 AND 98

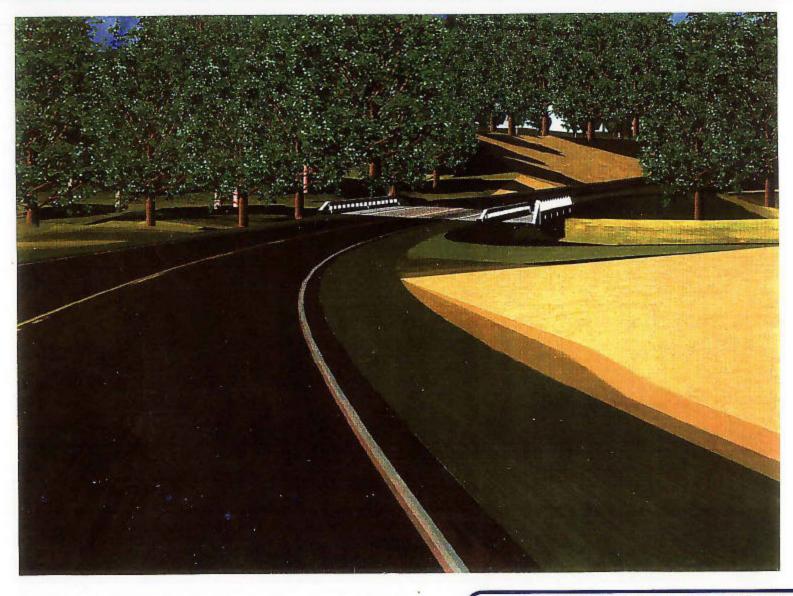
DATE: SEPTEMBER 2002 SCALE:

NONE



URS
Engineers/Architects/Planners/Surveyors
4 NORTH PARK ORINE, SUITE 300
HUNT VALLEY, MARYLAND 21030
TELEPHONE: 410-785-7220

igure:



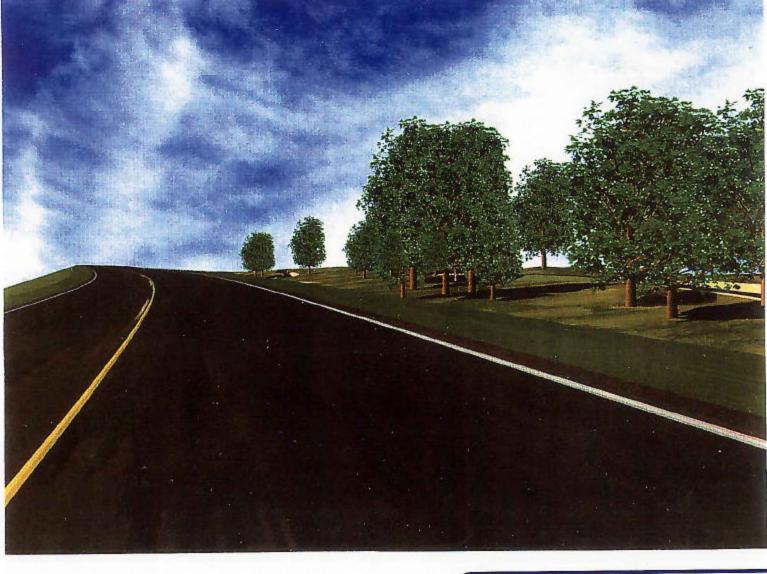
NATCHEZ TRACE PARKWAY MULTI-USE TRAIL - SECTION 3X



DESIGN VISUALIZATION: VIEW FROM PARKWAY OF TRAIL JOINING PARKWAY BRIDGE

SEPTEMBER 2002 SCALE: NONE





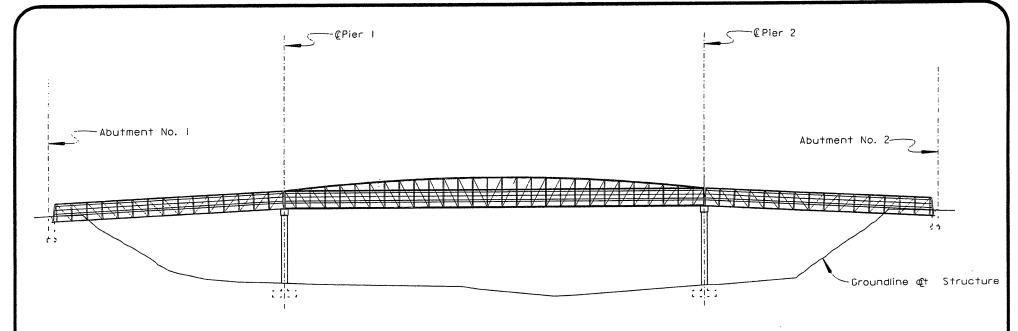
NATCHEZ TRACE PARKWAY MULTI-USE TRAIL - SECTION 3X



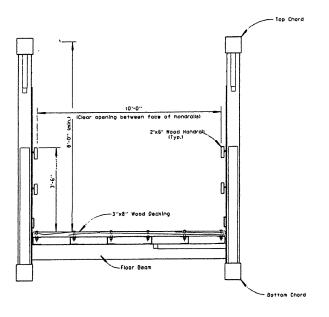
DESIGN VISUALIZATION: VIEW FROM PARKWAY OF TRAIL

SEPTEMBER 2002





ELEVATION



TYPICAL BRIDGE SECTION (Taken along span 2 midspan)

NATCHEZ TRACE PARKWAY MULTI-USE TRAIL - SECTION 3X



TYPICAL ELEVATION & SECTION FOR NEW BRIDGE CONSTRUCTION

DATE:
SEPTEMBER 2002
SCALE:
NONE

URS

Engineers/Architects/Planners/Survey
4 NORTH PARK DRIVE, SUITE 300
HUNTYALLEY, MARYLAND 21030
TELEPHONE 410-785-7220

Ç

